

CA24N
DG 705
80596

Government
Publications

SYSTEM RATIONALIZATION

A Responsibility and An Opportunity

Ontario Council on University Affairs

September 1980

CAJON
DG 705
- 80896

SYSTEM RATIONALIZATION

A Responsibility and An Opportunity

"... if the universities don't get together
and do the job themselves the Government
will step in and do it for them."

(J. A. Corry, 1968)

September, 1980

Ontario Council on University Affairs
700 Bay Street, 7th Floor
Toronto, Ontario
M5G 1Z6

CONTENTS

1.	Introduction	1
2.	The Undergraduate and Graduate Plans of the Institutions	6
3.	Undergraduate Program Planning and Cooperation	16
4.	Graduate Program Planning	23
5.	Epilogue	35
6.	Appendices	36



Digitized by the Internet Archive
in 2024 with funding from
University of Toronto

<https://archive.org/details/39202612060373>

Introduction

In its 1979 paper System on the Brink and in its most recent paper A Financial Analysis of the Ontario University System - 1980, Council voiced serious concerns about the future of the university system in Ontario. Persistent underfunding has strained the capacity of the Ontario universities to fulfill collectively the objectives of the university system as set forth by Council in its 1978 paper The Ontario University System: A Statement of Issues. In addition, the university system, which was greatly expanded to meet the demands of the 1960's, must contend with anticipated enrolment declines in this decade. The universities must seek to maintain quality and diversity in the face of these circumstances and make the most effective use of the public funds through which they are primarily financed.

These factors have led Council, and others, to conclude that there is a need for system-wide consolidation and rationalization in Ontario. The aim should be to provide the best possible range of programs of the highest quality with an appropriate degree of duplication, at any given level of funding. It is of paramount importance, particularly in a context of financial constraint and enrolment decline, to prevent and eliminate undesirable duplication in order to protect existing strong programs, to preserve opportunities for innovation, and to ensure that resources be effectively used and available in areas of need. The purpose of this paper is to discuss possible ways of achieving these objectives.

The approach to planning within a university system can vary from complete autonomy to total government control, with all possible mixes of autonomy and control in between. These matters have previously been addressed by Council in The Ontario University System:

A Statement of Issues. Many jurisdictions in North America have moved to university systems which involve extensive planning by government. In the existing Ontario university system there is considerable collective autonomy in program planning, except with respect to professional and graduate programs where the Minister retains final authority for funding approval. In rendering its advice to the Minister, Council has developed increasingly explicit criteria for evaluating proposals for new graduate programs and has employed similar concepts in evaluating proposals for new professional programs.

For most of the growth period of the last twenty years, there has been, at least at the undergraduate level, little attempt on the part of the university system in Ontario to coordinate program development. There has been a minimum of cooperative planning, on the assumption that, somehow or other, an acceptable total provincial array of programs would follow automatically from the sum of the plans of each institution. A somewhat more coordinated approach to planning has evolved at the graduate level. Any new graduate program that is introduced by a university must now satisfy a set of established criteria before it may be approved for funding purposes. In addition, procedures are now in place to evaluate existing graduate programs. With respect to planning, each institution is now aware of the proposed programs disclosed in the five-year plans of the other institutions. The question to be answered is whether the present arrangements are appropriate for Ontario and, if not, what direction should be taken in the future.

With many institutions involved in the system it may be that, without any coordinating effort, the outcomes of the independently drawn plans of the individual institutions may not be appropriate from a provincial perspective. Indeed, this is precisely the situation which the university system in Ontario is beginning to face.

While there is general agreement that it is desirable to leave as much planning responsibility as possible in the hands of the individual institutions, it is becoming increasingly clear that some degree of coordination and cooperation is necessary.

That Council is not alone in this view is evident, for example, from the response of the Council of Ontario Universities (COU) to The Ontario University System: A Statement of Issues in which COU stated its desire to have Council "assume a broader role in assisting the universities to coordinate their planning"¹. Further, the Ontario Confederation of University Faculty Associations in its 1980 brief to Council stated "Attention must be paid to the means by which universities might be encouraged and aided in the process of identifying long-range academic priorities... and in the coordination of academic offerings."²

Planning for the future must begin with two points in mind. First, there is a university system in Ontario. Second, there must be a developing recognition by all the institutions of the role of each institution within the system. Institutional role identification is a process which must evolve over time. Once this is established, each institution must accept its role within the system and base its plans for the future on its existing strengths. Role differentiation need not limit initiatives for development but should channel them to meet system needs where institutional strengths exist.

Council initiated discussions regarding role identification at the 1980 Spring hearings. While some institutions have clear perceptions of their roles, others are having difficulty in defining their distinctive roles within the university system. Council

1. The Role of OCUA, Council of Ontario Universities, June 1979, page 3.

2. Brief to the Ontario Council on University Affairs, Ontario Confederation of University Faculty Associations, February 1980, page 8.

considers that each university must come to grips with this issue as a basis for rationalizing and planning the effective development of Ontario's university system.

If the universities are to operate as a system, it is clear that some central authority is necessary to coordinate the process. It is unrealistic to assume that the institutions, acting independently, will be able to achieve rationalization. In Council's opinion, it would be preferable for this authority to reside with COU, but Council recognizes that a voluntary association of universities may not be in a position to exercise such authority.

In the sections that follow, Council addresses the issues of system planning and rationalization. A necessary aspect of any cooperative planning process is the introduction of mechanisms whereby the plans of each institution can be reviewed in the light of the plans of the others. Positive steps have recently been taken in this direction. The 1979 brief of the Ontario Council on Graduate Studies (OCGS) to Council contained a list of all graduate programs proposed in the universities' five-year plans for the first graduate planning quinquennium, 1979-80 to 1983-84, as well as a list of program proposals which appeared in earlier plans and submissions but which were not included in the five-year plans. Also, in the briefs presented to Council by the individual institutions during the 1980 Spring hearings, Council sought and received each institution's plans for the next four to five years at the undergraduate level. Each institution is therefore able to review the plans of the others. These undergraduate and graduate plans¹ are presented in the next section of this paper.

1. The lists of graduate plans have been revised to exclude programs which have been withdrawn or postponed, are not new, or have been approved for funding purposes.

In order to place these plans in proper perspective, the programs should be viewed both within an institutional and a provincial context. For this purpose, Council has provided, in the appendices, lists of the current program offerings of each institution. In Appendix A, Council has reprinted the lists of university program offerings that appear in the 1980-81 issue of the Ministry of Colleges and Universities publication Horizons. At the graduate level, Council in Appendix B, has grouped program offerings into the following eight sectors: Sector 1 - Humanities, Sector 2 - Fine and Applied Arts, Sector 3 - Social Sciences, Sector 4 - Applied Social Sciences, Sector 5 - Physical Sciences, Sector 6 - Applied Physical Sciences, Sector 7 - Life Sciences, and Sector 8 - Medical and Applied Life Sciences. Appendix C sets forth the graduate offerings of each institution and the 1979-80 enrolment in each program. These data were provided by OCGS. Council has also included estimates of each institution's proportion of provincial full-time equivalent (FTE) graduate enrolment and, based on these preliminary indicators of institutional strength, provides, in Appendix C, some observations on the provincial role of each institution in the various sectors at the doctoral level.

In the sections that follow the plans, Council addresses the problem of the direction for system rationalization and planning in the future. Because of the great differences that exist between the undergraduate and graduate areas, and in particular, the vastly different approaches that have been taken with respect to planning at each of these levels, Council deals with them separately. Each section begins with a short history of planning at the particular level and then addresses possible directions for rationalization and planning in the future.

The Undergraduate and Graduate Plans of the Institutions

The Undergraduate Plans that follow have been taken from the institutions' 1980 briefs to Council. These plans were included in the briefs in response to Council's request for information about each institution's plans to introduce new undergraduate programs or make major shifts in emphasis in existing undergraduate programs within the next four to five years. Quotations that appear have been taken from those briefs. The stages of planning are those that applied at the time the briefs were written.

The Graduate Plans are divided into two categories, where applicable: programs that appear in the five-year plans and other plans. The five-year plans are the universities' graduate plans for the first graduate planning quinquennium, 1979-80 to 1983-84. The Other plans consist of graduate proposals which appeared in earlier university plans or submissions, but were not included in the five-year plans. These lists of graduate program proposals have been revised to exclude programs which have been withdrawn or postponed by the universities, were not new, or have been approved for funding purposes.

Brock University

Undergraduate Plans

"New programs under active consideration consist in the main of regroupings of existing courses and include the following:"

- Canadian and European Community Studies
- Religious Studies
- Fine Arts
- Applied Human Biology

In addition, co-operative programs in Accounting, Urban Studies and Geography "have been developed".

Graduate Plans

Programs that appear in the five-year plan:

Sector 1 - MA Classics
MA French

Sector 3 - MA Geography
MA Sociology

Sector 4 - MAdmin Administration
MPE Physical Education

Carleton University

Undergraduate Plans

Several programs are "currently being considered for introduction in 1980-81":

School of Computer Science and an Honours program in Computer
Science
Operations Research
Law Enforcement Studies
Honours program in Film Studies

A major and an honours program in Law. "The new programs in Law would be multidisciplinary, and, like the existing combined programs in Law and another discipline, would emphasize the links between law and government, and the economy, and society generally. As such they would be fundamentally different from the programs in professional law schools, providing a focal point for a liberal education as well as a basis for certain law-related vocations."

The following programs "are at a preliminary stage of development":

International Relations
Local Studies
Building Science
Energy and Environmental Studies

Graduate Plans

Programs that appear in the five-year plan:

Sector 1 - PhD Canadian Literature

University of Guelph

Undergraduate Plans

Several "additions and changes to present programs are being implemented or investigated":

"A firm proposal for an extensive 'co-op' program involving the departments of Chemistry, Microbiology, Environmental Biology and Computing and Information Science is now at an advanced stage of planning..."

"...serious consideration is being given to incorporating an experiential component in the BSc.(Agr.) program."

"A new option within the B.A. program, 'Management Economics'..."

Graduate Plans

Programs that appear in the five-year plan:

Sector 2 - MA Theatre

Sector 5 - PhD Mathematics

Sector 8 - DVSc Veterinary Science

Lakehead University

Undergraduate Plans

"Serious consideration is being given to the expansion of our Native Teacher Education Program into a degree program."

"Lakehead University could serve a growing need in the forest industries by training Forest Engineers."

A Lakehead study revealed a need for a second school of Pharmacy in Ontario. Lakehead is considering the introduction of such a program.

Lakehead's "historical commitment to a number of diploma programs continues...The University has no intention of providing new diploma programs unrelated to our existing fields of study."

Graduate Plans

Programs that appear in the five-year plan:

Sector 4 - MBA Business Administration
MOR Outdoor Recreation

Sector 5 - MSc Computer Science

Sector 6 - MEng Engineering

Other plans:

Sector 5 - MSc Geology

Laurentian University

Undergraduate Plans

"Le Département de français will develop a special program for anglophones."

"A program in Public Administration, using existing resources, is...under active consideration."

"In the Science Faculty there will be a general extension of training in Computer science and statistics, while the Physics programme will show an accelerating shift to Applied Physics."

Graduate Plans

Programs that appear in the five-year plan:

Sector 4 - MBA Business Administration
MEd Education

McMaster University

Undergraduate Plans

New programs proposed:

Multidisciplinary undergraduate degree program in arts and science.

BA program in Labour Studies "...intended to complement our existing Certificate program".

"...the University Senate gave approval in principle to...the offering of joint degree-diploma programmes with Mohawk College [of Applied Arts and Technology]." Two proposals were approved: Broadcast Journalism and Commerce. A "proposal for a joint programme in occupational and physical therapy will soon be considered by Senate".

Graduate Plans

Programs that appear in the five-year plan:

Sector 2 - MA Music
MA Visual Arts

Sector 4 - PhD Business
MA/PhD Regional Science and Policy Analysis

Interdisciplinary - MSc Health and Radiation Physics
MA Mathematics and Philosophy

Other plans:

Sector 4 - MA(T)/MSc(T) Teaching

University of Ottawa

Undergraduate Plans

Because of the timing of their own institutional planning exercise, Ottawa's response to the request for undergraduate plans was of a "preliminary nature".

A new five-year program in Engineering Management will begin in the fall of 1980.

The departments of Computer Science and Electrical Engineering "will very likely be introducing a joint program in" Computer Engineering.

"The faculty [of Science and Engineering] is actively studying the possibility of establishing selective cooperative programs in some of its eleven departments. These programs will be more along the lines of those offered at the University of Victoria, rather than of those at the University of Waterloo."

"Commencing in 1981, the Faculty of Administration will be offering a generic program in" Administrative Studies.

At the time the brief was written, bilingual programs in Physiotherapy and Occupational Therapy were awaiting University Senate approval.

Ottawa is considering bilingual programs in Dentistry and Pharmacy.

"The faculty [of Health Sciences] has also received Senate approval to offer an undergraduate BSc program in" Medical Sciences.

"The Faculty of Social Sciences envisages the introduction of two new certificate programs." - Criminology and Recreation.

Ottawa has "decided to establish" a certificate program in Writing Skills (this is related to Translation).

"The Faculty of Arts is reviewing the requirements of the general B.A. degree in order to increase the Canadian content of the B.A. program."

The Faculty of Science and Engineering is planning two major shifts in emphasis. "First,...we would very much want to achieve more of a balance in the provision of instruction in French in some departments. Second,... the following areas will be emphasized in the next five years:" Engineering, Computer Science, Engineering Management and the Life Sciences (Biochemistry, Biology, Nutrition and Food Sciences).

Graduate Plans

Programs that appear in the five-year plan:

Sector 1 - PhD Linguistics
MA Pastoral Studies
MA Religious Education
MA Spanish
MA Translation

Sector 2 - MMus Music

Sector 4 - PhD Business
MAT Education
MSS Leisure Studies

Sector 5 - MSc Computer Science

Sector 6 - PhD Mechanical Engineering
MEng Engineering Management

Queen's University

Undergraduate Plans

Queen's has "no plans to introduce new undergraduate or first professional degree programs within the next four to five years." Queen's does, "however, foresee some changes in emphasis as follows:"

Arts and Science - "It is possible that course offerings leading to increased specialization in statistics will be developed..."

School of Business - "In the future, there may be increased emphasis on computing and information science."

Education - The Faculty of Education "intends to place increased emphasis on its two existing concurrent programs at Queen's and Trent. It is also enlarging the range of offerings in continuing education for teachers who have completed their B.Ed. program and are working in the school system."

Law - "The Faculty plans to place increased emphasis on clinical courses to complement its traditional teaching methods."

Graduate Plans

Programs that appear in the five-year plan:

Sector 1 - MTh/MIS Theology

Sector 2 - MA Visual Arts

Sector 4 - MA Industrial Relations

Other plans:

Sector 4 - PhD Business

University of Toronto

Undergraduate Plans

At present, Toronto has no plans "for introducing new undergraduate programs or for making significant changes in emphasis of existing programs."

Graduate Plans

Programs that appear in the five-year plan:

Sector 2 - MA Film

Sector 3 - MA Anthropology
PhD Criminology

Sector 4 - MAS Archival Science
MA Education (offered through the Faculty of Education
of the University of Toronto)
MLA Landscape Architecture
MPP Public Policy
PhD Social Work

Sector 6 - MASc Engineering

Sector 7 - MHSc Clinical Biochemistry

Sector 8 - MSc/PhD Interdisciplinary Toxicology

Interdisciplinary - MA/PhD East Asian Area Studies
MA Russian and East European Studies

Other plans:

Sector 8 - MHSc Speech Pathology
MHSc Clinical Biomedical Engineering

Trent University

Undergraduate Plans

"...Trent's plans for the immediate future are limited to consolidating and developing the newer programs and departments: Administrative and Policy Studies, Canadian Studies, Comparative Development Studies, Cultural Studies, and Environmental and Resource Studies... These plans would involve developing aspects of the programs central to their conception which have not yet fully matured; e.g. a policy emphasis in Administrative and Policy Studies, the use of traditional native teachers in the Native Studies program, communications and media study in the Cultural Studies program (which is also important to policy studies), and policy aspects of the Environmental and Resource Studies Program... This means that Trent does not intend to develop new programs or departments in the next few years..."

Graduate Plans

Trent is not planning any graduate programs for the first quinquennium.

University of Waterloo

Undergraduate Plans

A proposal "to establish an undergraduate program which would allow students in a wide variety of academic programs to study the field of risk insurance" has been accepted by the Canadian Life Insurance Association.

"A selection of existing undergraduate courses has been identified to form the basis of a program in Management Studies. The

courses will provide a minor area of study for students majoring in a variety of disciplines including English, Economics, Physics, Mathematics, Recreation, Geography, and Planning or a "shared major" area of study or a group of elective courses."

Waterloo is "investigating the establishment of undergraduate studies in Personnel and Administrative Studies."

"A program of study leading to a diploma in Occupational Health is being developed at the request of the Occupational Health Nurses Association of Ontario. The program, mostly in the audio-taped correspondence format, will consist mainly of courses already offered at Waterloo for various other degree programs."

Graduate Plans:

Programs that appear in the five-year plan:

Sector 5 - MMath Actuarial Science

Sector 8 - PhD Health Behaviour
PhD Physiological Optics

University of Western Ontario

Undergraduate Plans

The following programs have been "approved for the fall of 1980":

New work/study program in Financial Services
New Commercial Studies program
Honors Geography program in urban development

"Other programs with similar structures might be constructed around the pursuit of careers in finance, personnel management, the foreign service, etc."

Graduate Plans

Programs that appear in the five-year plan:

Sector 2 - PhD Music (two programs)
MA Visual Arts

Sector 4 - LL.M Law

Sector 8 - PhD Communicative Disorders
MCLSc Occupational Therapy
MCLD Paedodontics
MCLSc Physical Therapy

Other plans:

Sector 3 - MA Anthropology
PhD Sociology

Wilfrid Laurier University

Undergraduate Plans

In 1980, Wilfrid Laurier is "commencing a new honours program in computing and computer electronics, utilizing more fully the research and teaching interests of the Physics Department and combining programming and technology into one specialized field."

Wilfrid Laurier "hopes to introduce new Arts programs, such as a four year Arts core program in liberal Arts, as well as an applied core option."

At present, Wilfrid Laurier does "not intend to commence any further cooperative programs". They are, "however, planning to introduce internship programs which will provide students with study-related summer employment." Wilfrid Laurier is also reserving "the right to initiate formal cooperative programs in the event circumstances require it."

Graduate Plans

Programs that appear in the five-year plan:

Sector 4 - DSW Social Work

University of Windsor

"Very few 'new' programs are envisaged, but rather, current courses and programs will be restructured.

The Faculty of Arts is developing a new program in Canadian-American Studies, a Bachelor of Fine Arts in Design, a combined Bachelor's degree in Drama and Education, and another in Music and Religious Studies. It is also extending its 'Education through Music' enterprise.

Within the Faculty of Social Science, the Economics Department is investigating new interdisciplinary combinations involving Business and Law. The Department of History intends to increase its emphasis on Canadian and local history, including historical preservation, museum administration and archival methods. The School of Social Work is considering a new emphasis on community service to groups, as a complement to existing concentration on the social service to individuals. The Geography Department is introducing a cooperative Work Study program and new degree programs in resource management and climatology.

Within the Faculty of Science and Mathematics, new program combinations such as Geology and Computer Science, and Mathematics and Business are being considered.

The Faculty of Business Administration is studying the restructuring of its unique three-semester B.Comm. program for graduates in a discipline other than Business Administration. The objective is to achieve a better interface with the M.B.A. program and to reduce the services required.

The Faculty of Law and the Faculty of Business Administration are discussing a possible joint LL.B.-M.B.A. program.

The Faculty of Engineering will collaborate with Nursing, Biology and Chemistry in studying the demand for, and the feasibility of, providing a program in Occupational Safety and Industrial Toxicology.

The Faculty of Human Kinetics, consistent with its recent change in emphasis away from teacher training in Physical Education, is studying a job-experience co-operative program in Applied Kinesiology, a Medical Kinesiology stream in co-operation with St. Clair College [of Applied Arts and Technology], and a concentration on sports medicine with unique emphasis on co-operative work experience of fitness in the industrial setting."

Graduate Plans

Programs that appear in the five-year plan:

Sector 2 - MFA Theatre
MFA Visual Arts

Sector 4 - LL.M Law
EdD Education
PhD Physical Education

Sector 5 - MSc Computer Science
PhD Geology

York University

Undergraduate Plans

"York anticipates a continuation of its historical concern to offer new undergraduate programmes as need arises, particularly in the areas of strength [indicated in the brief]. It would be premature to provide a comprehensive list of all the new programmes we have in mind, partly because the feasibility of a number of them is just now being examined. We can say, however, that York is giving special attention to the development of language and translation programs...We should mention also that among our projected offerings with a serious chance of formal approval are programmes in mass communications, clinical rehabilitation, religious studies, and the problem of violence."

Graduate Plans

Programs that appear in the five-year plan:

Sector 2 - MA Visual Arts

Sector 3 - DPsych Psychology

Sector 4 - MA Communication Studies
MEd Education
MSW Social Work

Other plans:

Sector 2 - MFA Music

Sector 3 - PhD Economics

Sector 4 - PhD Business

Undergraduate Program Planning and Cooperation

There has been little cooperation in undergraduate program planning and development in the Ontario university system. At present, any new undergraduate program that is implemented by a university automatically becomes eligible for funding. The only clear exception to this is in the professional disciplines where all new programs must be approved by the Minister for funding purposes. Otherwise, each university is free to plan its undergraduate offerings without consulting either individual institutions or COU. It has been assumed that this autonomous approach to undergraduate planning, with the universities responding to provincial educational demands and needs, would result in a satisfactory mix of program offerings.

It has become increasingly clear to Council, however, that this autonomous approach to undergraduate planning is no longer appropriate from a provincial perspective. Program proliferation, when combined with financial restraint and enrolment decline, will lead to the spreading of resources too thinly and the dilution of strengths. In order to avoid these problems, some degree of cooperation at the undergraduate level is essential and some degree of coordination may be necessary.

The recognition of the need for increased cooperation at the undergraduate level is not new. As pointed out by the COU Committee on Long-Range Planning in its report, Challenge of Substance:

In 1976, COU approved the report of a Special Committee to Assess University Policies and Plans. The report included, inter alia these recommendations:

Recommendation 1:

- a) the government, OCUA, and the universities commit themselves to a realistic and frank dialogue on university goals and objectives;

- b) each university, where it has not already done so, prepare a statement of objectives for the remainder of the seventies;
- c) OCUA, with the assistance of COU, review these statements from the point of view of the overall provision of university resources in the Province of Ontario, and advise the government thereon;
- d) the government publicity react to the report from OCUA.

Recommendation 9

COU and the universities should commit themselves to continuing and expanding their efforts in planning and coordination and should receive financial support from government to assist these efforts.¹

Unfortunately, even though COU approved these recommendations, no steps have as yet been taken to implement them.

Council's own concerns about the undergraduate area were heightened when it reviewed the undergraduate plans and discussed them with representatives of the universities during the 1980 Spring hearings. This increased concern was caused by both the extent and types of programs being planned by the institutions. Some proposals appear to duplicate other planned or existing programs. In particular, some proposals appear to duplicate offerings in areas of strength at neighbouring institutions. For example, Wilfrid Laurier University is planning a program in Computing and Computer Electronics even though the neighbouring University of Waterloo has considerable strength in Computer Science. Also, York University is planning a program in Religious Studies even though the University of Toronto has strength in Religion and Theology. Many institutions are initiating more Business and related programs. In addition, several institutions are planning new "co-operative" work/study programs, emulating the programs developed at the University of Waterloo. While some development of Business and co-operative

1. Challenge of Substance, Committee on Long-Range Planning of the Council of Ontario Universities, March 1980, page 33.

programs may be a legitimate response to demands placed upon the system, Council is concerned about the extent to which the plans may represent an unnecessary degree of duplication. At the very least, the plans indicate a lack of consultation and cooperation in the area of program planning at the undergraduate level.

Such observations about the present plans lead Council to wonder whether, if some sort of coordinating mechanism had been introduced into undergraduate planning several years ago, the existing configuration of program offerings would have resulted. Council's concerns are borne out by the report of the COU Committee on Long-Range Planning.

In its report, the COU Committee questions whether the existing complement of programs best serves Ontario. A possibly telling example is found in the field of Languages:

... the tendency to uniformity exists here as elsewhere, so that (for example) one finds about 270 courses in Spanish language and Literature listed in the calendars, and almost another 100 in Spanish American, while in contrast, with the exception of about a dozen courses in Finnish at Lakehead and Laurentian, there appears not to be a single course in the language, literature, and culture of Scandinavia.... One must ask whether the cause of diversity or of public need is best served in such circumstances.¹

The report also refers to other examples of program duplication:

Did the introduction of three new programs in Drama in the years 1975 and 1976 serve the end of diversity, considering the number of programmes already existing? Was the introduction of programmes in African Studies at York and Toronto - essentially although not officially about the same time - the product of a shared understanding of the need for such studies and the reasoned, explicit coordination of the resources of the two institutions? Was Waterloo's introduction of a B.A. Honours in Music when Wilfrid Laurier's degree programs in Music were long-established decided on with the system in mind?²

It is clear from the undergraduate plans of the individual institutions and from the report of the COU Committee on Long-Range Planning that the universities have not in the past engaged

1. Ibid., pages 21-22.

2. Ibid., page 23.

in any system-wide consultation or cooperation in undergraduate programming. It is Council's opinion that it is not appropriate from a system viewpoint that the institutions continue to plan in isolation from one another, especially in a context of financial restraint and enrolment decline. In order to protect high quality programs and to ensure that resources will be available to introduce new programs that are needed, the institutions must begin to plan cooperatively. Council is not alone in this view. In its report, the COU Committee on Long-Range Planning stated its belief:

... that in the interest of effectiveness, quality, and economy in undergraduate education, a far greater amount of discussion and planning should go on between and among universities, with the needs of the system and the province in mind.¹

In order to proceed with any consultative or cooperative process at the undergraduate level, it is necessary to establish a basis upon which to assess program offerings. It is Council's opinion that the following four points, which were set out in the COU Committee's report, and which were considered by the Committee to be axiomatic, provide such a foundation:

- a) that within any university the offering of a considerable range of courses and programmes in a variety of basic areas of study is essential to the carrying on of undergraduate work;
- b) that a rich diversity of specialist programmes within the system is desirable in order that the wide variety of students' academic needs may be met;
- c) that it is in the interest of diversity and quality that each university should have some areas of particular academic strength that impinge directly on undergraduate programmes;
- d) that it is not necessary that the same areas of specialization exist in every university.²

Given these guidelines, the question of the nature of the cooperative effort that is most appropriate and desirable can be addressed. In this connection, Council refers to the following

-
1. Ibid., page 32.
 2. Ibid., pages 18 - 19.

two major recommendations contained in the report of the Committee on Long-Range Planning:

1. That each Ontario university immediately advise all other universities in the Province of all proposals for new undergraduate programmes now under active consideration at any level of decision-making; and hereafter of any new proposal for an undergraduate programme when it comes under active consideration. We suggest that the COU secretariat serve as a clearinghouse for this purpose.
2. That COU establish a standing policy committee on undergraduate programmes. We recognize that it would be unacceptable to give such a body authority. We propose for it such functions as these: the study of the changing needs of the system and the best means of achieving appropriate responses to those needs; the identification of new areas of concern and the encouragement of orderly programme development in relation to them; the facilitation and encouragement of discussion among universities of undergraduate programmes and policies, from the point of view of the system. The Committee should meet regularly and report to COU at least once a year. COU may perhaps wish the Long-Range Planning Committee to have the functions described here.¹

With respect to the Arts and Science "core" of undergraduate offerings, it is Council's opinion that these recommendations are, at this juncture, sufficient. It is preferable to preserve as much autonomy as possible in the development of "core" Arts and Science programs. The implementation of the Committee's recommendations at this level would facilitate the exchange of information among institutions. This interchange of ideas could foster diversity and innovation, prevent unnecessary duplication and identify areas in which there is a recognized need for new programs.

With respect to professional programs, Council believes that this exchange of information is desirable but clearly not sufficient. At present, any proposed professional program must be forwarded to Council for consideration and approved by the Minister for funding. In these cases, Council has in the past sought the advice of COU

1. Ibid., pages 35-36.

before making its recommendations. Council believes that COU has an important role in this decision-making process and will continue to seek COU's advice on these matters. However, because professional programs require substantial resources and are specifically related to the need for services in the province, Council anticipates that the funding of professional programs will continue to require ministerial approval.

There remains a third category of undergraduate programs which consists of programs which are neither "core" Arts and Science subjects nor strictly professional disciplines. Council here refers to these programs as "special" and "quasi-professional" programs. As an example of a "special" program, Council cites African Studies - clearly, there is not sufficient need for every university in Ontario to develop the expertise and resources to offer programs in this area. A mechanism is needed to determine where such programs of limited demand should be offered. In the "quasi-professional" area, Council would include programs, such as Physical Education, which neither lead to a professional degree in the usually accepted sense nor form part of an institution's Arts and Science offerings. In addition, Council would include in this category programs in subjects, such as Human Biology and Accounting, which may have traditionally been offered in Arts and Science faculties, but have the potential to develop into professional programs. Council is aware that many such programs have developed, and may continue to develop, to the point where for all practical purposes they are recognized professional programs. Since professional programs are subject to ministerial approval for funding purposes, Arts and Science subjects which could develop into professional programs must be given closer scrutiny than those in the "core" Arts and Science programs.

COU should monitor the development of these "special" and "quasi-professional" subject areas with the intention of avoiding unnecessary duplication and of identifying the de facto development of professional schools which should be referred to Council. Some coordination is necessary here and Council would prefer that COU assume this coordinating authority. If COU does not do so, it may be necessary for the Minister to require that all "special" and "quasi-professional" programs be submitted for funding approval.

In all of the above, Council has attempted to assess the undergraduate enterprise in Ontario, keeping in mind the constraints that exist. Given these constraints, Council believes that there is no alternative but to have the universities work together as a system. Council would clearly prefer to see the undergraduate enterprise develop as a self-regulating one through COU, and the approach outlined in the preceding pages reflects this view. Council recognizes the difficulty of a voluntary association of universities assuming the authority for program planning. However, time is short and unless there is clear evidence that COU is willing and able to accept this responsibility, the authority will have to reside elsewhere.

Graduate Program Planning

Perhaps the best place from which to begin any discussion of graduate program planning in Ontario is with the quotation that appears near the beginning of the recent Discussion Paper prepared by COU's Special Committee to Review Graduate Planning. The quotation is taken from an address, published in 1968, by the then Principal of Queen's University and Chairman of the Committee of Presidents, Dr. J. A. Corry:

We have known for some time that the days of laissez-faire in university education in Ontario are over....

The urgent reasons for cooperation in the field of graduate studies are not far to seek. An obvious one is that if the universities don't get together and do the job themselves the Government will step in and do it for them. The Minister of University Affairs alluded to this possibility in his Frank Gerstein lecture in February 1966, when he said that if the universities of Ontario failed to meet the responsibilities of the times, and "if costly duplication of effort is evident, I cannot imagine that any society, especially one bearing large expense for higher education, will want to stand idly by. For there will be inevitably a demand--there have been indications of this in other jurisdictions--that governments move in and take over." I do not regard this statement as a threat to university autonomy. Rather, I take it as an expression of the inevitable consequence of our failure to order our affairs in a reasonable way....

The financial constraints now facing the universities of Ontario push us strongly to cooperation in the expensive area of graduate studies. These constraints may not be unrelated to an impression in government circles that we have not done enough to put our houses in order. Anyway, there is growing evidence that the Government of Ontario, even with goodwill towards the university and an announced intention to give the highest priority to education, is not going to find it politically feasible to give the universities all the money they consider necessary for their development as institutions which are to be at once first class, and equipped to do all that is attractive to them and worthwhile doing for its own sake....To be blunt about it, the universities, taken individually, will never have enough for all good purposes and so will be operating in conditions of scarcity. We must, therefore, accept the hard consequences of scarcity, submit to the dictates of the "dismal science," and learn how to make the maximum use of our scarce resources.

As I have just said, I do not think the universities of Ontario will have the means to continue developing as first class institutions while at the same time pursuing a policy of self-sufficiency in which each counts on doing all that is attractive and well worth doing. So we face a choice. We can spread our scarce resources thinly in an effort at complete institutional independence of action while we sink down to second or third class status; or, on the other hand, we can aim at maintaining quality at the sacrifice of part of our self-sufficiency and some of our ambitions. Surely we must choose the latter course because no university worthy of the name would choose with its eyes open to be less than first class in what it offers. I do not think this latter alternative is as harsh as we fear. In Ontario, it is still open to each of us, in giving up some of our individual independence of action, to surrender it to the university system consisting of, and guided by, the universities themselves. It is greatly to the credit of the Government of Ontario that this is the course it would prefer to take.¹

The Special Committee states that the quotation was included in its paper "... not only because it so effectively expresses the concerns which gave graduate planning in Ontario an impetus, but also because his remarks seem still remarkably appropriate today."²

Many of the concerns expressed above are shared by Council. Indeed, they are the concerns which have guided, and continue to guide, Council in its approach to graduate program planning. In Advisory Memorandum 77-VII, Council set forth the following objectives for the first graduate planning quinquennium, 1979-80 to 1983-84:

1. Recognition and protection of outstanding doctoral programs;
2. Support of good quality graduate programs;
3. Elimination of graduate programs of unsatisfactory quality;
4. Prevention of further duplication of graduate programs;
5. Recognition of high quality graduate programs in new fields of study for which there is a genuine need;
6. Maintenance of a satisfactory amount of scholarship and research activity in the university system.³

1. Discussion Paper, Special Committee to Review Graduate Planning of the Council of Ontario Universities, June 1980, pages 2-3.

2. Ibid., page 3.

3. Fourth Annual Report 1977-78, Ontario Council on University Affairs, page 55.

Council doubts that there is any serious quarrel today with these specific objectives. However, although some progress has been made toward these objectives, the mechanism for achieving them remains a subject for discussion.

In Advisory Memorandum 77-VII, Council stressed the need for system rationalization and institutional role differentiation. In Council's opinion, the place to begin system rationalization was with new programs recommended for funding approval. While Council recognized that the elimination of unnecessary duplication among existing programs was important, it saw this as a longer-term goal and suggested that this might even become an explicitly stated goal of the second quinquennium.

Council established four funding criteria to assist the universities, COU and Council in assessing new program proposals on the basis of uniqueness, quality and need in a context of financial restraint. The four criteria are:

1. Evidence of need in Ontario and Canada to be provided by the Advisory Committee on Academic Planning and endorsed by the Council of Ontario Universities,
2. Certification from the Advisory Committee on Academic Planning through the Council of Ontario Universities that no similar program in the field(s) proposed is available in Ontario. (In exceptional circumstances Council may be willing to entertain a recommendation from ACAP through COU for funding a master's program where there is a similar program in Ontario but where there is also strong evidence of regional importance and student demand),
3. Certification from the Advisory Committee on Academic Planning, through the Council of Ontario Universities that the proposed program has passed a rigorous appraisal and at the time of appraisal was not found to require improvements,
4. Certification from the institution that admissions to the program commenced prior to its being proposed for funding consideration.¹

In the memorandum, Council went on to state that satisfaction of the four funding criteria would not necessarily guarantee a favourable

1. Ibid., pages 59-60.

funding recommendation and that "... Council's own task in the funding approval process would include the 'balancing of fiscal realities and new initiatives'"¹.

In 1979, Council received from COU the first set of graduate programs to be assessed according to the new criteria. It became clear at that time that some clarification of the criteria was necessary. On October 30, 1979, the Chairman of Council wrote to COU on behalf of the Graduate Committee clarifying the funding criteria and expanding upon Council's statement about the "balancing of fiscal realities and new initiatives":

Council is expressing the hope that you will understand that, in this period of fiscal constraint, it must seriously consider each new graduate program in light of the above statement. COU's assistance will be invaluable in carrying out this important task. In particular, Council needs assurance from COU that, from the viewpoint of 'a system on the brink', the program should be offered and funded despite financial constraint. In this connection, and consistent with the goal of system rationalization, Council would like to be assured by COU that the particular institution could best offer the program and that the program is consistent with the aims, objectives and existing strengths of the institution.²

There was much concern expressed within the university community over the October 30 letter. In particular, many felt that, by making the above statement, Council was introducing a "fifth criterion". This is clearly not the case, for in Advisory Memorandum 77-VII Council made the following statement:

The new era of straitened resources and declining graduate enrolments and the accompanying need for system-wide consolidation should encourage institutions to identify and give priority to the areas of graduate endeavour in which strength exists and which are key to the planned institutional identity.

The success of the graduate planning enterprise during the first quinquennium will be primarily dependent upon the pursuit of excellence by institutions in their areas of strength, and, of system rationalization by the university collectively on the basis of quality and need.³

1. Ibid., page 59.

2. This letter is reproduced as Appendix D.

3. Ontario Council on University Affairs, Fourth Annual Report, page 57.

With this clarification of the criteria, COU resubmitted a set of programs for funding consideration. In the new submission, COU expressed its concern that it was premature for it to address the question of the appropriateness of each program at the particular institution.

In responding to this concern, Council, in Advisory Memorandum 79-VII, stated that it understood the COU position in view of the fact that institutional role differentiation was to be a major topic at the 1980 Spring hearings and therefore accepted the statements provided by the institutions. Later in the memorandum, however, Council stated that:

In future, Council... expects that each graduate program funding proposal forwarded to Council will include COU's assurance that the program should be funded despite restraint and also that the program is consistent with the aims, objectives and existing strengths of the particular institution.¹

Recently, COU made the point to Council that it would be useful for the universities to have some comments from Council about program proposals when they first appear in the universities' plans. It was felt that this approach might aid the institutions in their planning to the extent that they could avoid committing resources to a program which had little likelihood of receiving funding approval. Council responded to this request in a letter to COU in February of this year. For information, the letter has been reprinted as Appendix E and should be viewed in conjunction with the graduate plans of the individual institutions.

Council cannot over-emphasize the need for system rationalization and institutional role differentiation in the graduate enterprise. While university autonomy is desirable, there remains no option but for the universities to work together to preserve the

1. Sixth Annual Report 1979-80, Ontario Council on University Affairs, page 83.

high quality system that has developed in Ontario, especially given the constraints facing that system. Unnecessary duplication of graduate programs must be prevented and eliminated in order to protect existing strong programs and to ensure that opportunities exist for innovation. In addition, the universities must plan their graduate programs in relation to their strengths.

If institutional role differentiation is to be achieved in the graduate sector, there must be some central authority to coordinate the process. It is unrealistic to assume that the universities acting independently will be able to achieve effective coordination by themselves. At present, final authority with respect to the funding of new graduate programs rests with the Minister. It is the Minister's goal, however, that full responsibility for the planning of the graduate enterprise eventually be returned to the system itself, once effective procedures for the assessment of programs are in place. This goal was stated by the Minister in her letter to the Chairman of Council, dated March 5, 1980, when she indicated her wish "that the appraisal/assessment system...be used to replace direct government and OCUA involvement in planning and approving the funding of graduate programs".

The COU Special Committee to Review Graduate Planning, in its Discussion Paper, suggests that the central issue relating to the future development of the graduate planning process is:

...whether the universities collectively can retain a significant degree of control over the graduate planning process, either under the present procedures, or through the development of new structures or procedures, or whether [the universities] are prepared to see either the OCUA or the Ministry assume this function directly.¹

In considering this question, the Special Committee provides examples of alternative models and options for discussion purposes. While some of the models present variations on "the present distribution

1. COU Special Committee, Discussion Paper, page 71.

of responsibility and authority between COU and its agencies... and OCUA/government"¹, others involve fundamentally different divisions of responsibility.

In Council's opinion, it is clearly preferable that COU perform the central coordinating and planning functions within the system. It may result, however, that the very nature of COU as a voluntary association precludes it from being able to carry out this task. Council would not necessarily take this to mean that Council itself or even the Ministry should then be given the responsibility of coordinating graduate planning. It may well be that some other agency should be created within the system to perform this role.

The Special Committee's "Independent Authority Model", for example, postulates the creation, by COU, of a "Committee on Graduate Planning and Appraisal"². This body would have the final authority for making funding recommendations to Council regarding new programs based on current criteria and on the continuation of funding for for existing programs. In addition, the committee would have final responsibility for appraisals and for planning and could be given a mandate to identify areas where new graduate programs needed to be developed. COU and OCGS "could have the right to comment on the [Committee's] recommendations, but would have no opportunity to change them"³.

If it became clear that even the type of COU committee described above could not effectively rationalize the system from within, then, in Council's view, no option would remain but to give full responsibility for graduate planning to a body appointed by Government.

Council is aware that system rationalization must deal with existing programs as well as the development of new ones. With respect to the existing enterprise, Council cannot over-emphasize the need for

1. Ibid., page 78.

2. Ibid., page 78.

3. Ibid., page 79.

very strict quality appraisals within the assessment procedures. If the programs in a discipline are not rigorously appraised, the effectiveness of the appraisal/assessment process must be questioned. Further, when a program is identified as being less than very good, the institution or COU must be able and willing to make decisions about the future of the program.

Depending upon the need for the program and the strength of the institution in that area, a range of options exists. Program closure is one solution. Mandatory strengthening of the program by the individual institution is another. Program merger is a further option. The Guelph-Waterloo Centre for Graduate Work in Chemistry is an excellent example of the potential success of program merger. While the merging of programs at neighbouring institutions may not result in any financial saving, the resulting improvement in quality can be substantial.

Council realizes that the decision to dismantle a program, or combine one with another, can be a difficult and, moreover, costly task that an institution would be reluctant to undertake. In this connection, Council would be prepared to discuss with either the institutions or with COU the possibility of introducing a scheme of rationalization grants. For example, if an institution wanted to dismantle a graduate program that was clearly not in an area of strength, Council might recommend that the institution receive a grant to defray the costs associated with such an endeavour. Similarly, Council might recommend grants for institutions to help defray the initial costs of merging graduate programs. While such grants would be taken from the global funding available to the system and would, therefore, represent a short-term cost to the system, they would clearly be worthwhile in the long-run and would serve the goals of system-wide consolidation and rationalization.

In all of the above, Council has emphasized the need for institutional role differentiation. To date, however, institutional role identification appears to be a problem with which both COU and the universities are experiencing difficulties. Council recognizes that this task is not an easy one and wishes to assist the universities and COU as much as possible in this regard. While some progress was made during the 1980 Spring hearings, much remains to be done; institutional role differentiation is an evolving process.

Some universities view role differentiation as a threat to their autonomy. Council must point out that this need not be the case. In fact, the institutions are already differentiated to a very great extent. What is necessary now is that each institution recognize its own role, as well as the roles of the others, and develop as a system, with each university channelling its initiatives in accordance with its role.

In order to assist the universities in this process of identification and recognition, Council has developed some preliminary indicators of institutional strengths. Figure 1, based on the information set forth in Appendix C, shows, for 1979-80, the distribution among universities of doctoral enrolment by sector. The following three categories are used:

1. If an institution has at least 7.5% of system FTE doctoral enrolment in a sector, Council takes this to indicate that the institution has a major involvement in that sector at the doctoral level and, therefore, that significant provincial resources are being devoted to that sector by that particular institution.
2. If an institution has less than 7.5% of system FTE doctoral enrolment in a sector, Council uses this to indicate that the institution has a rather more limited involvement in that sector. Although enrolment across the whole sector may be limited, that institution may have strengths within one or more disciplines within the sector.
3. If an institution does not offer any doctoral programs within a sector, it is considered to have no involvement in the sector.

Figure 1
Institutional Doctoral Enrolment By Sector

Sector Institution	Humanities	Fine and Applied Arts	Social Sciences	Applied Social Sciences	Physical Sciences	Applied Physical Sciences	Life Sciences	Medical & Applied Life Sciences
Carleton	X		XX		X	XX	X	
Guelph	X		X		X	X	XX	XX
McMaster	XX		XX		XX	XX	X	XX
Ottawa	XX		X	X	X	X	X	X
Queen's	X		XX		X	X	X	X
Toronto	XX	XX	XX	XX	XX	XX	XX	XX
Waterloo	X		X	X	XX	XX	X	
Western Ontario	XX		XX	X	XX	X	XX	XX
Windsor			X		X	X	X	
York	XX		XX	X	X		X	

7.5% (or more) of system enrolment- ☒

Less than 7.5% of system enrolment- ☐

No programs in that sector- ☐

Council recognizes that enrolment is but one indicator of institutional strength, but considers it to be a useful first step. Council is interested in discussing with COU the development of other indicators. Further, while some problems may exist with the sector approach to role identification, Council nonetheless believes that it has merit and looks forward to discussing it with the universities and with COU.

The sector approach could do more than provide a method by which the universities can classify their programs and strengths. It could also be significant in the planning and funding of new graduate programs. As mentioned earlier, the objectives and criteria for the first quinquennium are set and Council is not prepared to alter them at this time. It is perhaps not premature, however, to begin discussing the ground rules for the second quinquennium. The very nature of graduate planning in the second quinquennium will depend on the extent to which institutional role differentiation can be achieved in the present quinquennium. If role differentiation, based on a sector approach, takes shape in this quinquennium, then it is quite possible that the objectives and funding criteria for the second quinquennium could be based on this approach as well.

Council can envision a situation where a different set of criteria would apply to different program areas for each institution. For example, for sectors in which an institution is considered to have a major involvement, new programs would need only a quality appraisal in order to receive a funding recommendation. For sectors in which an institution does not now offer any programs, Council would expect that the institution would not propose the introduction of any programs.

The funding criteria for sectors in which an institution could be said to have limited involvement would be rather more difficult

to establish. In general, Council would expect that any new program would be subject to funding criteria similar to those that now exist for new programs. Each proposal, however, would have to be carefully considered by Council. This would be particularly important in situations where an institution has strengths in certain disciplines in a sector but not in many disciplines throughout the sector.

This approach to graduate planning would have many benefits. First, each institution would be aware of the strengths of the others. Second, it would assist the institutions in their planning to the extent that they would be aware, at a very early stage, of which programs would be likely to receive positive funding recommendations. Third, it would do much to rationalize the system yet preserve a measure of institutional autonomy. The institutions would be free to plan programs in certain areas, provided each program was of high quality.

Also, the sector approach, perhaps combined with grants for program merger or closure, would facilitate rationalization. For example, an institution might wish to dismantle a program in a sector in which it did not have the strength in order to redirect its resources to sectors of strength. The institution might then obtain a rationalization grant to help defray the costs of dismantling the program.

Epilogue

In all of the above, Council has made clear its belief that the responsibility for system rationalization and institutional role differentiation, as well as graduate planning, should, if possible, ultimately rest with COU and the universities. Council realizes that these tasks, which are essential to the quality and diversity of the Ontario university system, are tremendously difficult and may prove impossible for a voluntary association of universities to achieve. Council wishes to assist COU, in whatever manner possible, in achieving these goals. Council, therefore, looks forward to hearing the responses of the universities and COU to the proposals made in this paper.

APPENDICES

Programs available at Ontario universities

Note:

The following chart is a listing of programs offered at the 16 universities in Ontario. This is not a comprehensive list. For information on special programs see the individual university entries on pages 75-113. For information about programs offered at Ryerson Polytechnical Institute and the Ontario College of Art see pages 94-97 and page 114 respectively.

Codes:

- = undergraduate degree program
- + = undergraduate diploma program
- = undergraduate degree and diploma programs
- = undergraduate and graduate programs
- G = graduate study only
- M = minor specialization only
- † = check with university for details

	Universities	Brock	Carleton	Guelph	Lakehead	Laurentian	McMaster	Ottawa	Queen's	Royal Military College	Toronto	Trent	Waterloo	Western	Wilfrid Laurier	Windsor	York
40.00 Biological Sciences: Agriculture																	
40.01 Agricultural Biology, Business, Engineering				□													
40.02 Agriculture				†												M	
40.03 Horticulture				□												M	
40.04 Landscape Architecture				□							●						
41.00 Biological Sciences: Biology																	
41.01 Anatomy							G	†			G		G			M	
41.02 Biochemistry		□	●	□		●	□	□	●		□		□	□		●	
41.03 Biology, Biological Sciences		□	□	□	□	□	□	□	□		●	□	□	●	●	□	□
41.04 Botany		□	□	□		□					□		M	□		M	
41.05 Physiology		□	□				G	†			□		M	□		M	
41.06 Zoology		□	□	□		□					□		M	□		M	
42.00 Biological Sciences: Dentistry																	
42.01 Dental Surgery											□						
42.02 Dentistry											□			□			
43.00 Biological Sciences: Other																	
43.01 Environmental Studies		●	M	□			G	G	†		□	●	●	G		□	G
43.02 Forestry, Forest Technology					□						□						
43.03 Marine Biology, Sciences				□												M	
43.04 Medicine							□	□	□		□			□			
43.05 Microbiology, Immunology		M	●	□			G	†			□		M	□		M	
43.06 Nursing					●	●	●	●	●		□			□		■	
43.07 Nursing Education														G		M	
43.08 Occupational Therapy, Physical Therapy, Physiotherapy								●			●		●				
43.09 Optometry													□				
43.10 Pharmacology							G	G			□		G				
43.11 Pharmacy											□						
43.12 Veterinary Medicine				□													
44.00 General Arts and Science																	
44.01 General Arts		●	●	●	●			●	●		●	●	●	●	●	●	□
44.02 General Science		●	●	●	●	●	●	●	●		●	●	●	●	●	●	□
45.00 Humanities: Art, Fine Arts, Theatre																	
45.01 Art Conservation								G									
45.02 Art Education				†				●			●					M	■
45.03 Art, Fine Arts				●	●	●	●	●			M	●	●	●	●	□	□
45.04 Art History			●	●	†	●	●	●			□		●	●	●	●	
45.05 Dance						M							●	●		M	□
45.06 Drama, Dramatic Art		●		●	●	●	●	●	●		□		●	●		●	□
45.07 Film, Cinema		●	●				M	●	●		M		●	●		M	●
45.08 Medical Illustration											●						
45.09 Painting					●			●								M	□
45.10 Studio Art				●			●	●	●		●		●	●		●	□
45.11 Theatre, Theatre Arts		●			●			●					●			●	□

Notes:

The following chart is a listing of programs offered at the 16 universities in Ontario. This is not a comprehensive list. For information on special programs see the individual university entries on pages 75-113. For information about programs offered at Ryerson Polytechnical Institute and the Ontario College of Art see pages 94-97 and page 114 respectively.

Codes:

- = undergraduate degree program
- + = undergraduate diploma program
- = undergraduate degree and diploma programs
- = undergraduate and graduate programs
- G = graduate study only
- M = minor specialization only
- † = check with university for details

Universities	Brock	Carleton	Guelph	Lakehead	Laurentian	McMaster	Ottawa	Queen's	Royal Military College	Toronto	Trent	Waterloo	Western	Wilfrid Laurier	Windsor	York
46.00 Humanities: Canadian and International Studies																
46.01 Asian Studies	●					M				□		M		●	●	●
46.02 Canadian Studies	●	□	M	●	●	●	●	●		●	●	●	M	●	M	●
46.03 Indian, Eskimo, Native Studies				†	●						■		M		M	
46.04 Latin-American, Caribbean Studies								●		□	M				●	●
46.05 Middle and Near Eastern Studies										□						
46.06 Soviet, Russian Studies	●	□				□	●			□			●		●	
47.00 Humanities: Journalism																
47.01 Communication Arts			†				■			M					□	
47.02 Journalism		□										G		M		
48.00 Humanities: Languages and Literatures																
48.01 Chinese, Chinese Studies						M				□					M	M
48.02 Classics, Classical Studies	●	□	●	M	M	□	□	□		□	●	●	□	●	●	●
48.03 English Language and Literature	●	□	□	□	□	□	□	□	□	□	●	□	□	□	□	□
48.04 French Language and Literature	●	□	●	●	□	□	□	□	●	□	●	□	□	□	□	□
48.05 German Language and Literature	●	□	●	M	●	□	□	□		□	□	□	□	□	□	□
48.06 Greek Language and Literature	●	□	●			□	●			□	●	M	□	●	●	●
48.07 Italian Language and Literature	●	●	●	M	●	●	●			□		M	●		●	●
48.08 Latin Language and Literature	●	□	●	M	M	□		●		□	●	●	□	●	●	●
48.09 Linguistics, Applied Linguistics		●	●		●	M	□			□	M		●		●	●
48.10 Russian Language and Literature	●	●		M	●	●	□	●		□		□	●		●	●
48.11 Spanish Language and Literature	●	□	●	M	●	●	□	□		□	●	●	□	□	□	□
48.12 Translation, Interpretation					●	■	●			G					M	
49.00 Humanities: Music																
49.01 Music	●	●	●	●	●	●	●	●		□		●	□	●	●	□
49.02 Music Education						●	●	●		□			□		●	
49.03 Music History, Literature	●	●				●	●	●		□			□		●	●
49.04 Music Performance, Applied Music	●					●	●	●		□			□	●	●	●
49.05 Music Theory, Composition	●	●				●	●	●		□			□	●	●	●
50.00 Humanities: Philosophy and Religious Studies																
50.01 Philosophy	□	□	□	●	●	□	□	□		□	●	□	□	●	□	□
50.02 Religion, Religious Studies	●	□		M	●	□	□	●		□		●	●	□	□	●
50.03 Theology, Theological Studies						G	□	□		□			□	G		
51.00 Independent Studies																
51.01 Independent Studies, Experimental Programs		●								□	●	●		●		●
52.00 Physical Sciences: Engineering																
52.01 Ceramic Engineering						□				M						
52.02 Chemical Engineering				■	†	□	□	□	□	□		□	□		□	
52.03 Chemical Engineering Nuclear Option									●	□						
52.04 Civil Engineering		□		■	†	□	□	□	□	□		□	□		□	
52.05 Earth Science			□			●				□		□				
52.06 Electrical Engineering		□		■		□	□	□	□	□		□	□		□	
52.07 Engineering		□	□	■	†	†				□		G			□	
52.08 Engineering Physics				■		□		●	□	□						
52.09 Geological and Applied Earth Science								□		□		□			□	
52.10 Industrial Engineering									●	□						□
52.11 Management Engineering						●	●			□						
52.12 Materials Science		G				□			G	□			□		□	

Note:

The following chart is a listing of programs offered at the 16 universities in Ontario. *This is not a comprehensive list. For information on special programs see the individual university entries on pages 75-113. For information about programs offered at Ryerson Polytechnical Institute and the Ontario College of Art see pages 94-97 and page 114 respectively.*

Codes:

- = undergraduate degree program
- + = undergraduate diploma program
- = undergraduate degree and diploma programs
- D = undergraduate and graduate programs
- G = graduate study only
- M = minor specialization only
- † = check with university for details

	Universities	Brock	Carleton	Guelph	Lakehead	Laurentian	McMaster	Ottawa	Queen's	Royal Military College	Toronto	Trent	Waterloo	Western	Wilfrid Laurier	Windsor	York
Physical Sciences: Engineering (cont'd.)																	
52.13 Mechanical Engineering			□	■	†	□	□	□	□	□	□	□	□	□		□	
52.14 Metallurgical Engineering					●	□		□	□	□	□						
52.15 Mining Engineering					●			□			M						
52.16 Nuclear Engineering							G			G	□						
52.17 Systems Design			●								□		□				
53.00 Physical Sciences: Mathematics																	
53.01 Applied Mathematics		M	●	□	□		□	●	□		□		□	□		●	●
53.02 Computer Science		●	●	●	□		●	●	□		□	M	□	□		●	●
53.03 Mathematics		●	□	□	□	●	□	□	□	G	□	●	□	□	●	□	□
53.04 Mathematics and Physics		●		●				●	●	●	●		●	□			
53.05 Statistics		M	□	□			□		●	□	□	□	□			M	M
54.00 Physical Sciences: Physics																	
54.01 Astronomy						M		†		□				□			G
54.02 Biophysics		●		□			G			□				□		●	
54.03 Chemical Physics				□			G		●	□	□	□	□	□		□	G
54.04 Geophysics, Space Physics, Astrophysics			●						●	□				□		M	G
54.05 Mathematical Physics		●	●	□	●			●	●	□						□	M
54.06 Physics		□	□	□	□	□	□	□	□	G	□	□	□	□	●	□	□
55.00 Physical Sciences: Other																	
55.01 Applied Science				†						●	□					□	
55.02 Architecture			●								□		●				
55.03 Chemistry		□	□	□	□	□	□	□	□	G	□	□	□	□	●	□	□
55.04 Fuel and Energy Science					M						G						
55.05 Geography		●	□	□	●	●	□	□	□	□	□	□	□	□	□	□	□
55.06 Geology		□	□	M	●	□	□	□	□	□	□	□	□	□			
55.07 Metallurgy							□	□	□	□						M	
56.00 Regional Studies																	
56.01 Community, Urban, Regional Planning		●		+			G	G			□	□	G		●		
56.02 Urban Studies, Urbanism		●					G				□				●	●	●
57.00 Social Sciences: Business, Commerce, Economics																	
57.01 Accounting, Accountancy		●	M		●		M	■			●	M	●			□	□
57.02 Actuarial Science					●						●		●	●		M	
57.03 Administration, Administrative Studies		●					M	□				●	●	□	□	□	□
57.04 Business, Business Administration		●		M	■	□	G	□	□		G	●		□	□	□	□
57.05 Business Economics		●						□						G			□
57.06 Commerce		●	●		●	●	●	●	●	●				□	□	□	
57.07 Economics		●	□	□	□	●	□	□	□	□	●	□	□	□	●	□	□
57.08 Finance		●	M				M	●			●			□		□	□
57.09 Industrial, Labour Relations			M		●		M	■			G				G	M	□
57.10 Management, Management Sciences, Business Management		●		●			M	□			G		□	G	□	□	□
57.11 Marketing		●	M	□	●		M	●						G		□	□
57.12 Public Administration		●	■				M	■	G		■	●	●	■		■	G
58.00 Social Sciences: Education																	
58.01 Education		□		□	□	●	G	□	□		□	●		†		□	■
58.02 Elementary Education		●			□	■		●	□		●	●		●		●	■
58.03 Secondary Education		●		□				●	●		●	●	†	●		●	■
58.04 Special Education, Exceptional Children		M			M			●	†		M			□		G	■

Note:

The following chart is a listing of programs offered at the 16 universities in Ontario. *This is not a comprehensive list.* For information on special programs see the individual university entries on pages 75-113. For information about programs offered at Ryerson Polytechnical Institute and the Ontario College of Art see pages 94-97 and page 114 respectively.

Codes:

- = undergraduate degree program
- + = undergraduate diploma program
- = undergraduate degree and diploma programs
- = undergraduate and graduate programs
- G = graduate study only
- M = minor specialization only
- † = check with university for details

Universities	Brock	Carleton	Guelph	Lakehead	Laurentian	McMaster	Ottawa	Queen's	Royal Military College	Toronto	Trent	Waterloo	Western	Wilfrid Laurier	Windsor	York
59.00 Social Sciences: History																
59.01 Ancient History, Civilization	●					M	□			●	●		G		M	M
59.02 History	●	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
59.03 Mediaeval, Renaissance Studies	●					M	□	●		□		●	G		M	M
59.04 War Studies									G			†				
60.00 Social Sciences: Home Economics and Food Studies																
60.01 Clothing and Textiles, Design, Fashion			□										●		M	
60.02 Dietetics			□				●						●		M	
60.03 Family Studies, Family Science			□											M		
60.04 Home Economics			●										●		●	
60.05 Nutrition			□				●			□			●		M	
61.00 Social Sciences: Physical Education and Recreation																
61.01 Health, Health Studies				●		G	●	M		●		□			□	
61.02 Kinesiology			□				□			M		□			●	M
61.03 Physical Education, Physical and Health Education	●			□	●	□	□	□		●			□	M	□	□
61.04 Recreation	M			●			●			●		□				M
62.00 Social Sciences: Political Science																
62.01 Canadian Politics		□	†		†	M	●	†					G		M	M
62.02 International Affairs, Relations, Studies		□	G	M	†	M	●		●	□			G		●	M
62.03 Political and Economic Science									●							
62.04 Political Science, Politics		□	□	□	●	●	□	□	□	●	●	□	□	□	□	□
63.00 Social Sciences: Other																
63.01 Anthropology			□	●	●	●	□			□	□	●	□	●	□	□
63.02 Archaeology	●		●			M	●			□	M			●	M	
63.03 Criminology		●					G			□						
63.04 Law		M					□	□		□			●		●	□
63.05 Library Science				+						G			G			
63.06 Psychology	●	□	□	□	●	□	□	□		□	□	□	□	□	□	□
63.07 Secretarial Science, Art, Administration													●			
63.08 Social Work		G		●	●	●				G		●	●	G	□	●
63.09 Sociology	●	□	□	□	●	□	□	□		□	●	□	□	●	□	□

Graduate Program Sectors

Sector 1 - Humanities

Classics	Slavic Studies
Comparative Literature	East Asian Studies
English	History and Philosophy of Science and Technology
German	Medieval Studies
History	Middle East and Islamic Studies
Linguistics	Near Eastern Studies
Philosophy	Sanskrit and Indian Studies
Religious Studies	Translation
Romance Languages	

Sector 2 - Fine and Applied Arts

Art Conservation	Film
Art History	Music
Dance	Visual Arts
Drama and Theatre	

Sector 3 - Social Sciences

Anthropology	International Affairs
Canadian Studies	Political Science
Criminology	Psychology
Economics	Social and Political Thought
Geography	Sociology

Sector 4 - Applied Social Sciences

Architecture and Landscape Architecture	Law
Business and Administration	Library Science
Child and Development Studies	Museum Studies
Education	Physical Education, etc.
Industrial Relations	Social Work
Journalism and Communication Studies	Urban and Regional Planning
	Environmental Studies

Sector 5 - Physical Sciences

Astronomy	Geology, etc.
Chemistry	Mathematics
Computer Science, etc.	Physics

Sector 6 - Applied Physical Sciences

Aeronautical and Aerospace Engineering	Mechanical Engineering
Agricultural Engineering	Metallurgy and Materials Science
Biomedical Engineering	Mining Engineering
Chemical Engineering	Nuclear Engineering
Civil Engineering	Engineering Physics
Electrical Engineering	Resources Development
Geological Engineering	Engineering Science
Industrial Engineering and Systems Design	Engineering Management

Sector 7 - Life Sciences

Biochemistry
Biology
Biophysics
Botany

Microbiology and Immunology
Veterinary Microbiology and Immunology
Zoology

Sector 8 - Medical and Applied Life Sciences

Agricultural Sciences
Anatomy
Consumer Studies
Dentistry
Food and Nutrition
Forestry
Health Behaviour
Health Care Practice
Medical Science

Medical Specializations
Nursing
Pathology
Pharmacology
Pharmacy
Physiological Optics
Physiology
Veterinary Medical Sciences
Watershed Ecology

Interdisciplinary

Interdisciplinary Studies

Graduate Program Enrolment 1979-80¹

Brock University

Sector 1 - Humanities

Philosophy: MA 10FT, 3PT

Sector 3 - Social Sciences

Politics: MA 7FT, 4PT

Sector 4 - Applied Social Sciences

Education: MEd 8FT, 409PT

Sector 5 - Physical Sciences

Chemistry: MSc 7FT, 3PT

Geological Sciences: MSc 4FT, 1PT

Physics: MSc 1FT, -PT

Total: M 12FT, 4PT

Sector 7 - Life Sciences

Biological Sciences: MSc 12FT, 6PT

This enrolment accounts for 1.5% of total FTE² master's enrolment in the system. It also accounts for the following percentages of system FTE master's enrolment in each sector: Sector 1 - 1.0%, Sector 3 - 0.5%, Sector 4 - 2.5%, Sector 5 - 1.5%, and Sector 7 - 2.0%.

-
1. Programs which have not yet been approved for funding purposes have not been included.
 2. Full-time equivalent (FTE) enrolment has been estimated from the OCGS data as follows: FT + (0.3) (PT).

Carleton University

Sector 1 - Humanities

Classics:	MA	5FT,	3PT	
Comparative Literature:	MA	7FT,	4PT	
English:	MA	24FT,	32PT	
German:	MA	1FT,	12PT	
History:	MA	12FT,	12PT;	PhD 10FT, 4PT
Philosophy:	MA	9FT,	7PT	
Religious Studies:	MA	7FT,	7PT	
French:	MA	7FT,	14PT	
Spanish:	MA	8FT,	6PT	
Soviet & East Eur. Studies:	MA	11FT,	8PT	

Total: M 91FT, 105PT; D 10FT, 4PT

Sector 3 - Social Sciences

Anthropology:	MA	13FT,	10PT	
Economics:	MA	21FT,	22PT;	PhD 26FT, 4PT
Geography:	MA	22FT,	23PT	
Political Science:	MA	30FT,	20PT;	PhD 38FT, 21PT
Psychology:	MA	38FT,	22PT;	PhD 16FT, 4PT
Sociology:	MA	26FT,	24PT;	PhD 20FT, 13PT
International Affairs:	MA	59FT,	68PT	
Canadian Studies:	MA	53FT,	69PT	

Total: M 262FT, 258PT; D 100FT, 42PT

Sector 4 - Applied Social Sciences

Public Administration:	MPA	85FT,	117PT	
Journalism:	MJ	13FT,	11PT	
Social Work:	MSW	83FT,	65PT	

Total: 181FT, 193PT

Sector 5 - Physical Sciences

Chemistry:	MSc	18FT,	6PT;	PhD 14FT, 2PT
Info. & Systems Science:	MSc	7FT,	10PT	
Geology:	MSc	10FT,	10PT;	PhD 9FT, 9PT
Mathematics:	MSc	16FT,	6PT;	PhD 13FT, 4PT
Physics:	MSc	5FT,	2PT;	PhD 5FT, 1PT

Total: M 56FT, 34PT; D 41FT, 16PT

Sector 6 - Applied Physical Sciences

Civil Engineering:	MEng	25FT,	20PT;	PhD 9FT, 2PT
Electrical Engineering:	MEng	24FT,	12PT;	PhD 8FT, 5PT
Systems Engineering:	MEng	22FT,	51PT;	PhD 12FT, 8PT
Mechanical Engineering:	MEng	11FT,	10PT;	PhD 4FT, 4PT
Materials Engineering:	MEng	2FT,	2PT	
Aeronautical Engineering:	MEng	5FT,	2PT;	PhD -FT, 1PT

Total: M 89FT, 97PT; D 33FT, 20PT

Sector 7 - Life Sciences

Biology: MSc 26FT, 10PT; PhD 17FT, 1PT

Carleton's graduate enrolment accounts for 7.8% of system FTE master's enrolment, 4.3% of system FTE doctoral enrolment and 6.7% of total system FTE graduate enrolment. The doctoral enrolment also accounts for the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 0.9%, Sector 3 - 8.2%, Sector 5 - 5.7%, Sector 6 - 8.9% and Sector 7 - 4.0%. Carleton does not offer doctoral programs in Sectors 2, 4 and 8. Based on the data, Carleton has limited involvement in Sectors 1, 5 and 7 and major involvement in Sectors 3 and 6 at the doctoral level.

University of Guelph

Sector 1 - Humanities

English: MA 9FT, 6PT
History:¹ MA 7FT, 3PT; PhD 6FT, 1PT
Philosophy: MA 8FT, 3PT; PhD² 11FT, 2PT
Total: M 24FT, 12PT; D 17FT, 3PT

Sector 3 - Social Sciences

Economics: MA 5FT, 1PT
Agricultural Economics: MA 20FT, 7PT; PhD 4FT, 1PT
Geography: MA 8FT, 3PT
Agrometeorology: MA 4FT, 1PT; PhD 6FT, 2PT
Political Studies: MA 5FT, -PT
Psychology: MA 31FT, 10PT
Sociology: MA 8FT, 1PT
Total: M 81FT, 23PT; D 10FT, 3PT

Sector 4 - Applied Social Sciences

Extension Education: MSc 12FT, 13PT
Human Kinetics: MSc 4FT, 2PT
Landscape Architecture: MLA 28FT, 2PT
Total: 44FT, 17PT

Sector 5 - Physical Sciences

Chemistry:³ MSc 21FT, 5PT; PhD 20FT, 1PT
Soil Science: MSc 12FT, 3PT; PhD 1FT, -PT
Geomorphology: MSc 8FT, 1PT
Math + Stats: MSc 9FT, 2PT
Physics: MSc 2FT, -PT; PhD 6FT, -PT
Total: M 52FT, 11PT; D 27FT, 1PT

Sector 6 - Applied Physical Sciences

Engineering: MSc 6FT, 3PT; PhD 1FT, -PT
Resources Development: MA/MSc 12FT, 7PT
Total: M 18FT, 10PT; D 1FT, -PT

Sector 7 - Life Sciences

Environmental Biology: MSc 38FT, 8PT; PhD 14FT, -PT
Biophysics: MSc 2FT, 1PT; PhD 5FT, -PT
Botany + Genetics: MSc 10FT, -PT; PhD 4FT, 1PT
Microbiology: MSc 12FT, 2PT; PhD 2FT, -PT
Vet. Micro. + Immun.: MSc 14FT, -PT; PhD 9FT, 1PT
Zoology: MSc 40FT, 4PT; PhD 28FT, 1PT

-
1. Includes Scottish Studies.
 2. Estimate - half of Guelph-McMaster joint doctoral program enrolment.
 3. Estimate - half of Guelph-Waterloo joint graduate program enrolment.

Total: M 116FT, 15PT; D 62FT, 3PT

Graduate Diploma-Veterinary Microbiology & Immunology:
4FT, -PT

Sector 8 - Medical and Applied Life Sciences

Food Science:	MSc	9FT, 2PT; PhD	3FT, 1PT
Nutrition:	MSc	9FT, 2PT; PhD	7FT, -PT
Family Studies: ¹	MSc	18FT, 3PT; PhD	1FT, -PT
Pathology:	MSc	7FT, 2PT; PhD	7FT, -PT
Animal & Poultry Science:	MSc	27FT, 5PT; PhD	10FT, 1PT
Biomedical Science:	MSc	9FT, 1PT; PhD	4FT, -PT
Clinical Studies:	MSc	5FT, 8PT	
Consumer Studies:	MSc	2FT, 4PT; PhD	-FT, -PT
Crop Science:	MSc	34FT, 3PT; PhD	14FT, 1PT
Horticultural Science:	MSc	15FT, 3PT; PhD	6FT, -PT
Total:	M	135FT, 33PT; D	52FT, 3PT

Graduate Diploma² - Clinical Studies³: 13FT, -PT
Pathology: 6FT, -PT

Guelph's graduate enrolment accounts for 4.3% of system FTE master's enrolment, 3.3% of system FTE doctoral enrolment and 4.0% of total system FTE graduate enrolment. The doctoral enrolment accounts for the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 1.5%, Sector 3 - 0.8%, Sector 5 - 3.4%, Sector 6 - 0.2%, Sector 7 - 14.7% and Sector 8 - 20.8%. Guelph does not offer any doctoral programs in Sectors 2 and 4. At the doctoral level, Guelph has limited involvement in Sectors 1, 3, 5 and 6 and major involvement in Sectors 7 and 8.

-
1. Applied Human Nutrition.
 2. Graduate Diploma enrolment is not included in the calculation of total system, sector or institutional enrolment.
 3. Includes diplomas in several areas.

Sector 1 - Humanities

English: MA 3FT, 3PT

History: MA -FT, 2PT

Total: M 3FT, 5PT

Sector 3 - Social Sciences

Economics: MA 10FT, 1PT

Psychology: MA 24FT, 3PT

Sociology: MA 3FT, 9PT

Total: M 37FT, 13PT

Sector 4 - Applied Social Sciences

Education: MEd 6FT, 70PT

Coaching: MA/MSc 4FT, 1PT

Total: M 10FT, 71PT

Graduate Diploma - Business Administration: 23FT, 24PT

Sector 5 -Physical Sciences

Chemistry: MSc 11FT, 2PT

Mathematics: MA/MSc 2FT, -PT

Physics: MSc 6FT, -PT

Total: M 19FT, 2PT

Sector 7 - Life Sciences

Biology: MSc 5FT, 1PT

Sector 8 - Medical and Applied Life Sciences

Forestry: MSc 9FT, 1PT

Lakehead's master's enrolment accounts for 0.9% of system FTE master's enrolment. It also accounts for the following percentages of system FTE master's enrolment in each sector: Sector 1 - 0.4%, Sector 3 - 2.3%, Sector 4 - 0.6%, Sector 5 - 2.2%, Sector 7 - 0.8% and Sector 8 - 1.3%.

Laurentian University

Sector 1 - Humanities

English: MA 10FT, 4PT

History: MA 5FT, 3PT

Total: M 15FT, 7PT

Sector 4 - Applied Social Sciences

Child and Development Studies: MA 2FT, 9PT

Graduate Diploma - Business Administration: 10FT, 113PT

Sector 5 - Physical Sciences

Chemistry: MSc 11FT, 2PT

Geology: MSc 9FT, 11PT

Physics: MSc -FT, 2PT

Total: M 20FT, 15PT

Sector 7 - Life Sciences

Biology: MSc 12FT, 4PT

Laurentian's master's enrolment accounts for 0.5% of total system FTE master's enrolment and, in each sector, for the following percentages: Sector 1 - 1.5%, Sector 4 - 0.1%, Sector 5 - 2.7% and Sector 7 - 1.9%.

McMaster University

Sector 1 - Humanities

Roman Studies: MA 6FT, 1PT; PhD 4FT, 2PT
English: MA 24FT, 33PT; PhD 29FT, 3PT
German: MA 6FT, 3PT
History: MA 20FT, 9PT; PhD 22FT, 2PT
Philosophy: MA 18FT, 6PT; PhD 10FT, 2PT
Religious Studies: MA 21FT, 8PT; PhD 32FT, 16PT
French: MA 10FT, 8PT

Total: M 105FT, 68PT; D 97FT, 25PT

Sector 3 - Social Sciences

Anthropology: MA 22FT, 3PT; PhD 13FT, 5PT
Economics: MA 13FT, 1PT; PhD 36FT, 4PT
Geography: MSc/MA 25FT, 7PT; PhD 17FT, 2PT
Political Science: MA 13FT, 2PT; PhD (discontinued)
Psychology: MA 10FT, 4PT; PhD 28FT, 3PT
Sociology: MA 17FT, 3PT; PhD 23FT, 18PT

Total: M 100FT, 20PT; D 117FT, 32PT

Sector 4 - Applied Social Sciences

Business Administration: MBA 203FT, 293PT
Adapted Human Biodynamics: MSc 6FT, 1PT
Social Welfare Policy: MA(SWP) 5FT, 29PT

Total: M 214FT, 323PT

Sector 5 - Physical Sciences

Chemistry: MSc 17FT, 2PT; PhD 39FT, 9PT
Computation: MSc 9FT, 12PT
Geology: MSc 18FT, 3PT; PhD 10FT, 1PT
Mathematics: MSc 1FT, 2PT; PhD 14FT, 1PT
Statistics: MSc -FT, -PT
Physics: MSc 15FT, 3PT; PhD 24FT, 4PT

Total: M 60FT, 22PT; D 87FT, 15PT

Sector 6 - Applied Physical Sciences

Chemical Engineering: MEng 11FT, 7PT; PhD 15FT, 5PT
Civil Engineering: MEng 18FT, 30PT; PhD 5FT, 5PT
Electrical Engineering: MEng 24FT, 5PT; PhD 15FT, 3PT
Mechanical Engineering: MEng 13FT, 11PT; PhD 15FT, 2PT
Metallurgy and Materials
Science: MSc/MEng 11FT, 6PT; PhD 12FT, -PT
Nuclear Engineering: PhD 9FT, 1PT
Engineering Physics: MEng 17FT, 16PT

Total: M 94FT, 75PT; D 71FT, 16PT

-
1. Estimate - half of Guelph-McMaster joint doctoral program enrolment.

Sector 7 - Life Sciences

Biochemistry: MSc 13FT, -PT; PhD 4FT, -PT

Biology: MSc 13FT, 4PT; PhD 20FT, -PT

Total: M 26FT, 4PT; D 24FT, -PT

Sector 8 - Medical and Applied Life Sciences

Medical Science: MSc 42FT, 32PT; PhD 43FT, 6PT

Health Care Practice: MHSc 28FT, -PT

Total: M 70FT, 32PT; D 43FT, 6PT

McMaster's graduate enrolment accounts for 7.1% of system FTE master's enrolment, 9.0% of system FTE doctoral enrolment and 7.7% of total system FTE graduate enrolment. The doctoral enrolment accounts for the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 8.7%, Sector 3 - 9.2%, Sector 5 - 11.5%, Sector 6 - 17.3%, Sector 7 - 5.6% and Sector 8 - 17.6%.

McMaster does not offer any doctoral programs in Sectors 2 and 4. Based on this information, McMaster can be said to have limited involvement in Sector 7 and major involvement in Sectors 1, 3, 5, 6 and 8 at the doctoral level.

University of Ottawa

Sector 1 - Humanities

Classics:	MA	7FT,	3PT;	PhD	7FT,	1PT
English:	MA	6FT,	6PT;	PhD	17FT,	17PT
History:	MA	20FT,	32PT;	PhD	7FT,	5PT
Lettres françaises:	MA	16FT,	15PT;	PhD	14FT,	14PT
Linguistics:	MA	7FT,	27PT			
Applied Linguistics:	MA	3FT,	10PT			
Philosophy:	MA	20FT,	12PT;	PhD	25FT,	15PT
Religious Studies:	MA	3FT,	7PT;	PhD	10FT,	10PT
Slavic Studies:	MA	4FT,	5PT;	PhD	8FT,	7PT

Total: M 86FT, 117PT; D 88FT, 69PT

Sector 3 - Social Sciences:

Criminology:	(MA	8FT,	12PT
	(MCA	72FT,	11PT
Economics:	MA	24FT,	28PT; PhD (Enrolment suspended)
Geography:	MA	15FT,	9PT; PhD 11FT, 3PT
Political Science:	MA	29FT,	14PT
Psychology ¹ :	MA /MPs	70FT,	22PT; PhD 46FT, 35PT
Sociology:	MA	22FT,	12PT

Total: M 240FT, 108PT; D 57FT, 38PT

Sector 4 - Applied Social Sciences

Business Administration:	MBA	104FT,	231PT
Health Administration:	MHA	53FT,	28PT
Education:	MA	1FT,	12PT; PhD 13FT, 29PT
	MEd	57FT,	318PT
Law:	LLM	12FT,	84PT; LLD 1FT, 3PT
Canon Law:	MDC	17FT,	2PT; PhD (DC) 6FT, - PT
Physical Education (Administration):	MPE	15FT,	15PT
Kinanthropology:	MSc	12FT,	10PT
Regional Planning:	MP1	17FT,	13PT

Total: M 288FT, 713PT; D 20FT, 32PT

Graduate Diploma - Administration: Enrolment included in MBA².

Sector 5 - Physical Sciences

Chemistry:	MSc	11FT,	3PT; PhD 23FT, 2PT
Geology:	MSc	9FT,	1PT; PhD 10FT, 1PT
Mathematics:	MA /MSc	5FT,	2PT; PhD 1FT, -PT
Physics:	MSc	4FT,	2PT; PhD 6FT, -PT
Systems Science:	MSc	8FT,	5PT

Total: M 37FT, 13PT; D 40FT, 3PT

Sector 6 - Applied Physical Sciences

Chemical Engineering:	MASc /MEng	7FT,	3PT; PhD 9FT, 2PT
Civil Engineering:	MASc /MEng	22FT,	7PT; PhD 5FT, 1PT
Electrical Engineering:	MASc /MEng	25FT,	29PT; PhD 4FT, 6PT
Mechanical Engineering:	MASc /MEng	10FT,	9PT

Total: M 64FT, 48PT; D 18FT, 9PT

1. Includes enrolment from two programs.
2. The diploma may be awarded to students who leave the MBA program after the first year.

Sector 7 - Life Sciences

Biochemistry:	MSc	5FT, -PT; PhD	11FT, -PT
Biology:	MSc	34FT, 11PT; PhD	9FT, 6PT
Microbiology and Immunology:	MSc	2FT, -PT; PhD	1FT, -PT
Total:		M	41FT, 11PT; D 21FT, 6PT

Sector 8 - Medical and Applied Life Sciences

Anatomy:	MSc	5FT, 1PT; PhD	1FT, -PT
Pathology:	MSc	2FT, -PT; PhD	-FT, 3PT
Pharmacology:	MSc	3FT, 2PT; PhD	3FT, -PT
Physiology:	MSc	4FT, -PT; PhD	1FT, 1PT
Total:		M	14FT, 3PT; D 5FT, 4PT

Ottawa's graduate enrolment accounts for 9.1% of system FTE master's enrolment, 5.7% of system FTE doctoral enrolment and 8.1% of total system FTE graduate enrolment. The doctoral enrolment accounts for the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 9.1%, Sector 3 - 5.0%, Sector 4 - 4.4%, Sector 5 - 5.1%, Sector 6 - 4.7%, Sector 7 - 5.3% and Sector 8 - 2.4%. Ottawa does not offer any doctoral programs in Sector 2. Based on this information, Ottawa can be said to have limited involvement in Sectors 3, 4, 5, 6, 7 and 8 and major involvement in Sector 1 at the doctoral level.

Queen's University

Sector 1 - Humanities

Classics: MA 1FT, -PT
English: MA 28FT, 12PT; PhD 30FT, 6PT
German: MA 6FT, -PT; PhD 6FT, 2PT
History: MA 35FT, 16PT; PhD 19FT, 8PT
Philosophy: MA 2FT, -PT; PhD 7FT, -PT
French: MA 3FT, 3PT; PhD 4FT, 3PT
Spanish: MA 1FT, -PT

Total: M 76FT, 31PT; D 66FT, 19PT

Sector 2 - Fine and Applied Arts

Art Conservation: MAC 21FT, 6PT

Sector 3 - Social Sciences

Economics: MA 41FT, 20PT; PhD 39FT, 23PT
Geography: MA 24FT, 9PT; PhD 10FT, 3PT
Political Science: MA 28FT, 13PT; PhD 29FT, 10PT
Psychology: MA 18FT, 7PT; PhD 52FT, 17PT
Sociology: MA 19FT, 2PT

Total: M 130FT, 51PT; D 130FT, 53PT

Sector 4 - Applied Social Sciences

Management: MBA 213FT, -PT
Public Administration: MPA 27FT, 36PT
Education: MEd 14FT, 112PT
Law: LL.M. 6FT, 3PT
Physical and Health Education: MA/MSc 11FT, 2PT
Urban and Regional Planning: MPl 25FT, 26PT

Total: M 296FT, 179PT

Sector 5 - Physical Sciences

Chemistry: MSc 16FT, 2PT; PhD 10FT, 2PT
Computing and Information Science: MSc 19FT, 5PT
Geological Science: MSc 36FT, 7PT; PhD 19FT, 3PT
Mathematics and Statistics: MA/MSc 12FT, 7PT; PhD 14FT, 1PT
Physics: MSc 18FT, 1PT; PhD 4FT, -PT

Total: M 101FT, 22PT; D 47FT, 6PT

Sector 6 - Applied Physical Sciences

Chemical Engineering: MSc 9FT, 4PT; PhD 1FT, 2PT
Civil Engineering: MSc 17FT, 6PT; PhD 3FT, 2PT
Electrical Engineering: MSc 12FT, 5PT; PhD 7FT, 3PT
Mechanical Engineering: MSc 8FT, 3PT; PhD 3FT, 5PT
Metallurgical Engineering: MSc 5FT, 3PT; PhD 1FT, 1PT
Mining Engineering: MSc 6FT, 4PT; PhD -FT, 1PT

Total: M 57FT, 25PT; D 15FT, 14PT

Sector 7 - Life Sciences

Biochemistry:	MSc 11FT, 1PT; PhD 4FT, 2PT
Biology:	MSc 24FT, 3PT; PhD 19FT, 2PT
Microbiology and Immunology:	MSc 11FT, 3PT; PhD 4FT, -PT
Total:	M 46FT, 7PT; D 27FT, 4PT

Sector 8 - Medical and Applied Sciences

Anatomy:	MSc 3FT, 1PT; PhD 1FT, 2PT
Pathology:	MSc 1FT, -PT; PhD -FT, -PT
Pharmacology:	MSc 7FT, -PT; PhD 8FT, -PT
Physiology:	MSc 13FT, 1PT; PhD 1FT, -PT
Medicine:	MSc 1FT, -PT
Paediatrics:	MSc 1FT, -PT
Surgery:	MSc -FT, -PT
Community Health and Epidemiology:	MSc 6FT, 8PT
Total:	M 32FT, 10PT; PhD 10FT, 2PT

This enrolment represents 7.3% of system FTE master's enrolment, 6.2% of system FTE doctoral enrolment and 7.0% of total system FTE graduate enrolment. The doctoral enrolment represents the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 6.0%, Sector 3 - 10.6%, Sector 5 - 6.1%, Sector 6 - 4.4%, Sector 7 - 6.6.% and Sector 8 - 4.2%. Queen's does not offer any doctoral programs in Sectors 2 and 4. Based on this information, Queen's can be said to have limited involvement in Sectors 1, 5, 6, 7 and 8 and a major involvement in Sector 3.

University of Toronto

Sector 1 - Humanities

Classics:	MA/PhilM	6FT,	5PT; PhD	19FT,	6PT
Comparative Literature:	MA	8FT,	5PT; PhD	18FT,	2PT
English:	MA/PhilM	52FT,	64PT; PhD	143FT,	27PT
German:	MA/PhilM	2FT,	6PT; PhD	21FT,	2PT
History:	MA	22FT,	23PT; PhD	93FT,	14PT
Linguistics:	MA	11FT,	9PT; PhD	12FT,	-PT
Philosophy:	MA/PhilM	22FT,	8PT; PhD	72FT,	13PT
Religious Studies:	MA	9FT,	-PT; PhD	11FT,	-PT
French:	MA/PhilM	5FT,	14PT; PhD	32FT,	5PT
Italian:	MA/PhilM	4FT,	12PT; PhD	19FT,	8PT
Spanish & Portuguese:	MA/PhilM	7FT,	12PT; PhD	23FT,	3PT
Slavic Languages & Lit.:	MA	1FT,	1PT; PhD	21FT,	7PT
East Asian Studies:	MA/PhilM	4FT,	4PT; PhD	15FT,	-PT
History & Phil. of Sci. & Tech.:	MA	11FT,	2PT; PhD	10FT,	6PT
Medieval Studies:	MA	21FT,	6PT; PhD	83FT,	8PT
Middle East & Islamic Studies:	MA/PhilM	5FT,	-PT; PhD	3FT,	-PT
Near Eastern Studies:	MA/PhilM	6FT,	7PT; PhD	21FT,	4PT
Sanskrit & Indian Studies:	MA/PhilM	-FT,	1PT; PhD	8FT,	2PT
Total: M		196FT, 179PT; D 624FT, 107PT			

Graduate Diploma - Russian and East European Studies: - FT, -PT

Sector 2 - Fine and Applied Arts

Drama:	MA/PhilM	12FT,	2PT; PhD	32FT,	6PT
Music:	MA/MusM	33FT,	19PT; PhD/MusDoc	15FT,	4PT
History of Art:	MA/PhilM	13FT,	23PT; PhD	4FT,	2PT
Total: M		58FT, 44PT; D 51FT, 12PT			

Sector 3 - Social Sciences

Anthropology:	MA/PhilM	15FT,	16PT; PhD	71FT,	9PT
Criminology:	MA	18FT,	44PT		
Geography:	MA/PhilM/MSc	24FT,	11PT; PhD	29FT,	4PT
Political Economy:	MA/PhilM	46FT,	26PT; PhD	153FT,	41PT
Psychology:	MA	10FT,	1PT; PhD	52FT,	11PT
Sociology:	MA/PhilM	11FT,	6PT; PhD	70FT,	17PT
Total: M		124FT, 104PT; D 375FT, 82PT			

Sector 4 - Applied Social Sciences

Management Studies:	MBA	193FT,	369PT; PhD	23FT,	15PT
Education ¹ :	MA	100FT,	82PT; PhD	315FT,	104PT
	MEd	122FT,	1,383PT; EdD	82FT,	181PT
	MA(T)/MSc(T)	-FT,	25PT		
Law:	LLM	16FT,	10PT; DJur	6FT,	2PT
Library Science:	MLS	172FT,	51PT; PhD	7FT,	5PT
Social Work:	MSW	227FT,	1PT; DSW	31FT,	17PT
Urban & Regional Planning:	MScPl	39FT,	33PT; PhD	6FT,	1PT
Industrial Relations:	MIR	29FT,	16PT		
Architecture:	MArch	8FT,	3PT		
Museum Studies:	MMSt	26FT,	17PT		
Total: M		932FT, 1,990PT; D 470FT, 325PT			

1. Enrolment at the Ontario Institute for Studies in Education is included

Sector 5 - Physical Sciences

Astronomy:	MSc	7FT, -PT; PhD	18FT, -PT
Chemistry:	MSc	22FT, 3PT; PhD	61FT, 6PT
Computer Science:	MSc	37FT, 45PT; PhD	52FT, 8PT
Geology:	MEng/MSc	19FT, 18PT; PhD	26FT, 3PT
Mathematics:	MSc	6FT, 15PT; PhD	19FT, 6PT
Statistics:	MSc	9FT, 4PT; PhD	15FT, 1PT
Physics:	MSc	55FT, 8PT; PhD	79FT, 10PT
Total: M		155FT, 93PT;	D 270FT, 34PT

Sector 6 - Applied Physical Sciences

Chemical Engineering ¹ :	MASc/MEng	38FT, 72PT; PhD	22FT, 2PT
Civil Engineering:	MASc/MEng	48FT, 110PT; PhD	10FT, 7PT
Electrical Engineering ² :	MASc/MEng	78FT, 97PT; PhD	33FT, 12PT
Industrial Engineering:	MASc/MEng	18FT, 26PT; PhD	11FT, 4PT
Mechanical Engineering:	MASc/MEng	30FT, 43PT; PhD	13FT, 2PT
Metallurgy & Materials Science:	MASc/MEng	15FT, 16PT; PhD	13FT, -PT
Aerospace Engineering:	MASc/MEng	41FT, 13PT; PhD	18FT, 4PT
Total: M		268FT, 377PT;	D 120FT, 31PT

Sector 7 - Life Sciences

Biochemistry:	MSc	20FT, 4PT; PhD	15FT, 2PT
Clinical Biochemistry:	MSc	6FT, 3PT; PhD	8FT, -PT
Medical Biophysics:	MSc	32FT, 3PT; PhD	26FT, 2PT
Botany:	MSc	33FT, 11PT; PhD	19FT, 5PT
Microbiology & Parasitology:	MSc	19FT, 5PT; PhD	4FT, -PT
Immunology:	MSc	5FT, 2PT; PhD	3FT, 2PT
Zoology:	MSc	61FT, 8PT; PhD	66FT, 7PT
Total: M		176FT, 36PT;	D 141FT, 18PT

Sector 8 - Medical and Applied Life Sciences

Anatomy:	MSc	4FT, 3PT; PhD	2FT, -PT
Dentistry:	MSc/MScD	8FT, 4PT; PhD	7FT, -PT
Nutrition and Food Science:	MSc	10FT, 6PT; PhD	10FT, -PT
Forestry:	MScF	15FT, 8PT; PhD	8FT, -PT
Medical Science:	MSc	13FT, 10PT; PhD	15FT, 4PT
Nursing:	MScN	33FT, 29PT	
Pathology:	MSc	5FT, -PT; PhD	9FT, 1PT
Pharmacology:	MSc	13FT, 7PT; PhD	20FT, 3PT
Physiology:	MSc	17FT, 5PT; PhD	22FT, 6PT
Community Health:	MSc/MHSc	135FT, 14PT; PhD	9FT, 6PT
Pharmacy:	MScPhm	12FT, 4PT; PhD	-FT, 1PT
Total: M		265FT, 90PT;	D 102FT, 21PT

1. Includes Nuclear Engineering

2. Includes Biomedical Engineering

Toronto's graduate enrolment represents 26.0% of system FTE master's enrolment, 45.0% of system FTE doctoral enrolment and 31.8% of total system FTE graduate enrolment. The doctoral enrolment represents the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 54.9%, Sector 2 - 100%, Sector 3 - 29.2%, Sector 4 - 84.6%, Sector 5 - 35.1%, Sector 6 - 29.5%, Sector 7 - 34.2%, and Sector 8 - 42.6%. It is clear from this that Toronto has a major involvement in all sectors.

Trent University

Sector 1 - Humanities

History: MA 6FT, -PT

Sector 3- Social Sciences

Anthropology: MA 10FT, 2PT

Sector 5 - Physical Sciences

Chemistry: MSc 2FT, 2PT

Physics: MSc 2FT, 1PT

Total: M 4FT, 3PT

Sector 8 - Life Sciences

Watershed Ecology: MSc 13FT, 3PT

Trent's master's enrolment represents 0.3% of total system FTE master's enrolment. It also accounts for the following percentages of system FTE master's enrolment in each sector: Sector 1 - 0.5%, Sector 3 - 0.6%, Sector 5 - 0.5%, Sector 8 - 1.9%

University of Waterloo

Sector 1 - Humanities

English:	MA/MPhil	50FT, 33PT
German:	MA/MPhil	10FT, 1PT; PhD 8FT, 4PT
History:	MA/MPhil	30FT, 14PT; PhD 8FT, 5PT
Philosophy:	MA/MPhil	15FT, 2PT; PhD 20FT, 5PT
French:	MA	4FT, 2PT
Russian:	MA	8FT, -PT

Total: M 117FT, 52PT; D 36FT, 14PT

Sector 3 - Social Sciences

Economics:	MA	13FT, 2PT
Geography:	MA	32FT, 16PT; PhD 11FT, 4PT
Political Science:	MA	18FT, 2PT
Psychology (Psy.:	MA	18FT, 5PT; PhD 56FT, 28PT
(App. Psy.:	MASc	32FT, 7PT
Sociology:	MA	19FT, 5PT; PhD 17FT, 4PT

Total: M 132FT, 37PT; D 84FT, 36PT

Sector 4 - Applied Social Sciences

Management Science:	MASc	18FT, 81PT; PhD 9FT, 7PT
Kinesiology:	MA	29FT, 6PT; PhD 10FT, 1PT
Recreation:	MA	12FT, 12PT
Regional Planning:	MA	50FT, 20PT; PhD 13FT, 8PT

Total: M 109FT, 119PT; D 32FT, 16PT

Sector 5 - Physical Sciences

Chemistry ¹ :	MSc	20FT, 4PT; PhD 21FT, 2PT
Computer Science:	MPhil/MMath	48FT, 17PT; PhD 20FT, 10PT
Earth Sciences:	MSc	35FT, 12PT; PhD 6FT, 2PT
Mathematics - Pure:	MPhil/MMath	4FT, -PT; PhD 8FT, -PT
Applied:	MPhil/MMath	10FT, 1PT; PhD 7FT, -PT
Stats:	MPhil/MMath	14FT, 55PT; PhD 8FT, 3PT
C & O ² :	MPhil/MMath	7FT, -PT; PhD 20FT, 6PT
General:	MPhil/MMath	1FT, 37PT
Physics:	MSc	12FT, 4PT; PhD 19FT, 1PT

Total: M 151FT, 130PT; D 109FT, 24PT

Sector 6 - Applied Physical Sciences

Chemical Engineering:	MASc	10FT, 25PT; PhD 20FT, 2PT
Civil Engineering:	MASc	35FT, 28PT; PhD 18FT, 3PT
Electrical Engineering:	MASc	28FT, 17PT; PhD 25FT, 4PT
Systems Design:	MASc	17FT, 2PT; PhD 18FT, 4PT
Mechanical Engineering:	MASc	35FT, 55PT; PhD 18FT, 8PT

Total: M 125FT, 127PT; D 99FT, 21PT

Graduate Diploma - Civil Engineering (Construction Mgmt.): 1FT, -PT

-
1. Estimate - half of Guelph-Waterloo joint graduate program enrolment
 2. Combinatorics and Optimization

Sector 7 - Life Sciences

Biology: MSc 43FT, 5PT; PhD 25FT, -PT

Sector 8 - Medical and Applied Life Sciences

Health Behaviour: MSc 9FT, 2PT

Physiological Optics: MSc 2FT, 4PT

Total: M 11FT, 6PT

Waterloo's graduate enrolment accounts for 7.1% of system FTE master's enrolment, 8.0% of system FTE doctoral enrolment and 7.4% of total system FTE graduate enrolment. The doctoral enrolment represents the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 3.4%, Sector 3 - 6.9%, Sector 4 - 5.5%, Sector 5 - 14.6%, Sector 6 - 24.0% and Sector 7 - 5.8%. Waterloo does not offer any doctoral programs in Sectors 2 and 8. From this information, Waterloo can be said to have limited involvement in sectors 1, 3, 4 and 7 and major involvement in Sectors 5 and 6.

University of Western Ontario

Sector 1 - Humanities

Classics:	MA	-FT, -PT
Greek:	MA	-FT, -PT
Latin:	MA	-FT, -PT
English:	MA	19FT, 14PT; PhD 32FT, 13PT
Canadian Literature:	MA	-FT, -PT
German:	MA	4FT, 1PT
History:	MA	24FT, 20PT; PhD 10FT, 5PT
Philosophy:	MA	7FT, 1PT; PhD 28FT, 9PT
French:	MA	4FT, 3PT; PhD 8FT, 12PT
Spanish:	MA	8FT, -PT

Total: M 66FT, 39PT; D 78FT, 39PT

Sector 2 - Fine and Applied Arts

Music: MA/MMus 55FT, 30PT

Sector 3 - Social Sciences

Economics:	MA	23FT, -PT; PhD 31FT, 20PT
Geography:	MSc/MA	21FT, 9PT; PhD 19FT, 7PT
Political Science:	MA	16FT, 21PT; PhD 4FT, 3PT
Psychology:	MA	39FT, 1PT; PhD 38FT, 34PT
Sociology:	MA	23FT, 17PT

Total: M 122FT, 48PT; D 92FT, 64PT

Sector 4 - Applied Social Sciences

Business Administration:	MBA	493FT, 1PT; PhD 16FT, 12PT
Education:	Med	16FT, 248PT
	MA(T)	2FT, 6PT
Journalism:	MA	37FT, -PT
Library Science:	MLS	145FT, 87PT; PhD 8FT, 5PT
Physical Education:	MA	21FT, 26PT; PhD 2FT, 1PT

Total: M 714FT, 368PT; D 26FT, 18PT

Sector 5 - Physical Sciences

Astronomy:	MSc~	-FT, -PT; PhD 2FT, -PT
Chemistry:	MSc	15FT, -PT; PhD 22FT, 2PT
Computer Science:	MSc	11FT, 13PT
Geology:	MSc	16FT, 3PT; PhD 27FT, 4PT
Geophysics:	MSc	4FT, -PT; PhD 3FT, 1PT
Mathematics:	MA	2FT, -PT; PhD 9PT, 3PT
Applied Math:	MSc	2FT, 2PT; PhD 10FT, 2PT
Physics:	MSc	12FT, -PT; PhD 4FT, -PT

Total: M 62FT, 18PT; D 77FT, 12PT

Sector 6 - Applied Physical Sciences

Engineering Science: MSc/MEng 46FT, 39PT; PhD 22FT, 10PT

Sector 7 - Life Sciences

Biochemistry: MSc 18FT, 4PT; PhD 20FT, 4PT

Biophysics: MSc 7FT, 2PT; PhD 5FT, 2PT

Plant Science: MSc 24FT, 2PT; PhD 12FT, 2PT

Microb. & Immun: MSc 10FT, 1PT; PhD 14FT, -PT

Zoology: MSc 26FT, 4PT; PhD 19FT, 1PT

Total: M 85FT, 13PT; D 70FT, 9PT

Sector 8 - Medical and Applied Life Sciences

Anatomy: MSc 9FT, 3PT; PhD 5FT, 2PT

Paediatric Dentistry: MClD 8FT, 1PT

Nursing: MScN 14FT, 20PT

Pathology: MSc 2FT, -PT; PhD -FT, -PT

Pharmacology: MSc 3FT, 2PT; PhD 7FT, 1PT

Physiology: MSc 13FT, 3PT; PhD 5FT, 2PT

Medical Specializations -

Family Medicine: MClSc 7FT, 5PT

Speech Pathology: MSc/MClSc 54FT, 4PT

Epidemiology: MSc -FT, 17PT; PhD 10FT, 9PT

Medicine: MClSc 1FT, -PT

Paediatrics: MClSc -FT, -PT

Surgery: MClSc -FT, -PT

Anaesthesiology: MClSc -FT, -PT

Diagnostic Radiology: MClSc -FT, -PT

Obstetrics and Gynaecology: MClSc -FT, -PT

Ophthalmology: MClSc -FT, -PT

Otolaryngology: MClSc -FT, -PT

Psychiatry: MClSc -FT, -PT

Radiation Oncology: MClSc -FT, -PT

Total: M 111FT, 55PT; D 27FT, 14PT

Western's enrolment represents 12.3% of system FTE master's enrolment, 8.5% of system FTE doctoral enrolment and 11.1% of total system FTE graduate enrolment. The doctoral enrolment represents the following percentages of system FTE doctoral enrolment by sector: Sector 1 7.5%, Sector 3 - 8.1%, Sector 4 - 4.7%, Sector 5 - 10.1%, Sector 6 - 5.7%, Sector 7 - 17.0%, and Sector 8 - 12.3%. Western does not offer any doctoral programs in Sector 2. Based on this information, Western can be said to have limited involvement in Sectors 4 and 6 and a major involvement in Sectors 1, 3, 5, 7 and 8.

Wilfrid Laurier University

Sector 1 - Humanities

History: MA 3FT, 6PT
Religion and Culture: MA 9FT, 23PT
Romance Languages: MA 3FT, 2PT
Total: M 15FT, 31PT

Sector 3 - Social Sciences

Geography: MA 13FT, 14PT
Political Science: MA 6FT, 2PT
Psychology: MA 15FT, 7PT
Total: M 34FT, 23PT

Sector 4 - Applied Social Sciences

Business Administration: MBA 14FT, 30PT
Social Work: MSW 144FT, 11PT
Total: M 144FT, 41PT

This master's enrolment accounts for 1.9% of system FTE master's enrolment, and, in each sector, for the following percentages: Sector 1 - 2.1%, Sector 3 - 2.3% and Sector 4 - 3.0%.

University of Windsor

Sector 1 - Humanities

English:	MA 15FT, 7PT
Creative Writing:	MA 2FT, -PT
History:	MA 12FT, 10PT
Philosophy:	MA 3FT, 3PT
Religious Studies:	MA 5FT, 10PT
Romance Languages:	MA 2FT, 1PT
French:	MA 2FT, 4PT
Spanish:	MA -FT, -PT

Total: M 41FT, 35PT

Sector 3 - Social Sciences

Economics:	MA 15FT, 1PT
Geography:	MA 7FT, 5PT
Political Science:	MA 12FT, 6PT
Psychology:	MA 29FT, 7PT; PhD 41FT, 19PT
Sociology:	MA 8FT, 6PT

Total: M 71FT, 25PT; D 41FT, 19PT

Sector 4 - Applied Social Sciences

Business Administration:	MBA 67FT, 57PT
Education:	MEd 6FT, 267PT
Communication Studies:	MA 12FT, 4PT
Human Kinetics:	MHK 21FT, 4PT
Social Work:	MSW 17FT, 14PT

Total: M 123FT, 346PT

Sector 5 - Physical Sciences

Chemistry:	MSc 11FT, 7PT; PhD 10FT, 3PT
Geology:	MSc 6FT, 1PT
Mathematics:	MSc 9FT, 3PT; PhD 12FT, -PT
Physics:	MSc 8FT, -PT; PhD 8FT, 2PT

Total: M 34FT, 11PT; D 30FT, 5PT

Sector 6 - Applied Physical Sciences

Chemical Engineering:	MASc 4FT, -PT; PhD 2FT, 1PT
Civil Engineering:	MASc 14FT, 8PT; PhD 8FT, -PT
Electrical Engineering:	MASc 9FT, 8PT; PhD 7FT, 2PT
Industrial Engineering:	MASc 7FT, 1PT; PhD 2FT, 1PT
Mechanical Engineering:	MASc 6FT, 4PT; PhD 2FT, 3PT
Engineering Materials:	MASc 3FT, 2PT; PhD -FT, -PT
Geological Engineering:	MASc 2FT, -PT

Total: M 45FT, 23PT; D 21FT, 7PT

Sector 7 - Life Sciences

Biology: MSc 18FT, 4PT; PhD 12FT, 1PT

The above enrolment accounts for 4.0% of the FTE master's enrolment, 2.2% of the FTE doctoral enrolment and 3.4% of the total FTE graduate enrolment in the system. The doctoral enrolment accounts for the following percentages of system FTE doctoral enrolment in each sector: Sector 3 - 3.4%, Sector 5 - 4.0%, Sector 6 - 5.3% and Sector 7 - 2.9%. Windsor does not offer any doctoral programs in Sectors 1, 2, 4 and 8. It can be said to have limited involvement in Sectors 3, 5, 6 and 7.

York University

Sector 1 - Humanities

English: MA 31FT, 59PT; PhD 49FT, 31PT
History: MA 12FT, 22PT; PhD 12FT, 14PT
Philosophy: MA 8FT, 4PT; PhD 20FT, 3PT

Total: M 51FT, 85PT; D 81FT, 48PT

Sector 2 - Fine and Applied Arts

Theatre: MFA -FT, -PT
Dance: MFA 10FT, -PT
Film: MFA 7FT, -PT
Visual Arts: MFA 15FT, -PT

Total: M 32FT, -PT

Sector 3 - Social Sciences

Social Anthropology: MA 11FT, 3PT
Economics: MA 32FT, 28PT
Geography: MA 16FT, 12PT; PhD 4FT, 2PT
Political Science: MA 27FT, 14PT; PhD 55FT, 10PT
Psychology: MA 48FT, 10PT; PhD 82FT, 26PT
Sociology: MA 37FT, 10PT; PhD 53FT, 20PT
Social & Political Thought: MA 2FT, 1PT; PhD 38FT, 14PT

Total: M 173FT, 78PT; D 232FT, 72PT

Sector 4 - Applied Social Sciences

Administrative Studies: MBA 312FT, 751PT
Public Administration: MPA 4FT, 13PT
Law: LIM 15FT, 82PT; DJur 5FT, 1PT
Physical Education: MA/MSc 18FT, 1PT
Environmental Studies: MES 155FT, 60PT

Total: M 504FT, 907PT; D 5FT, 1PT

Graduate Diploma - Law: 4FT, -PT

Sector 5 - Physical Sciences

Chemistry: MSc 3FT, 11PT; PhD 8PT, -PT
Mathematics: MA 2FT, 16PT
Physics: MSc 5FT, 2PT; PhD 11FT, 2PT
Exp. Space Science: MSc 4FT, 4PT; PhD 13FT, 6PT

Total: M 14FT, 33PT; D 32FT, 8PT

Sector 7 - Life Sciences

Biology: MSc 36FT, 6PT; PhD 16FT, 1PT

Interdisciplinary

Interdisciplinary Studies: MA 23FT, 5PT

York graduate enrolment accounts for 9.9% of system FTE master's enrolment, 7.8% of system FTE doctoral enrolment and 9.3% of total system FTE graduate enrolment. The doctoral enrolment represents the following percentages of system FTE doctoral enrolment by sector: Sector 1 - 8.0%, Sector 3 - 18.5%, Sector 4 - 0.8%, Sector 5 - 4.3% and Sector 7 - 3.8%. York does not offer any doctoral programs in Sectors 2, 6 and 8. Based on the above information, York has limited involvement in Sectors 4, 5 and 7 and a major involvement in Sectors 1 and 3.



Ontario
Council on
University
Affairs

416/965-5233

7th Floor
700 Bay Street
Toronto, Ontario
M5H 2T8

October 30, 1979

Dr. E. J. Monahan,
Executive Director,
Council of Ontario Universities,
130 St. George Street,
Suite 8039,
Toronto, Ontario.
M5S 2T4

Dear Dr. Monahan,

The following statement is sent to you from the Graduate Committee of Council. The Graduate Committee welcomes this opportunity to clarify the requests that I conveyed to you on October 18, 1979 concerning the submission of information on new graduate programs for which funding is being sought. The Committee believes that this statement faithfully reflects the views that were advanced by Council in reaction to the programs that were submitted to it in September. Nevertheless, Council will take the opportunity to reaffirm these views within the next few weeks, should it deem this to be necessary.

With respect to the format of the funding request for each graduate program, COU should present a short brief of approximately three to five pages in length describing the program and clearly indicating that the program has satisfied each of the four funding criteria.

Council's first criterion concerns evidence of need. In Advisory Memorandum 77-VII, Council did state that it was reluctant to define need strictly but also indicated that it would expect to see evidence of both student demand and external demand. Council suggested that one example of student demand would be 'numbers of students admitted and applying to a program'. With respect to external demand, what is desired is information concerning the sectors and specific areas in which graduates of the program will be employed. In other jurisdictions, where do graduates of similar programs find employment? Within Ontario, have there been any advertisements for, or has any organization expressed a desire to employ, individuals with the qualifications

.../2

that this program will provide? You will note that this information will help to demonstrate the 'availability of employment opportunities' that Council mentioned in the memorandum.

The second criterion is concerned with the uniqueness of the program. Council is therefore requesting that the description of the program include a statement in layman's language about the program's unique features and how it differs from any other program (graduate or otherwise) in the province that may be considered to be similar. Naturally, for Master's programs which are considered to be of regional importance, the uniqueness criterion will be interpreted accordingly.

The third criterion concerns the appraisal of the graduate program. As stated in the memorandum, Council wishes to know not only that 'the proposed program has passed a rigorous appraisal' but that 'at the time of appraisal [it] was not found to require improvements'.

The fourth criterion states that Council requires 'Certification from the institution that admissions to the program commenced prior to its being proposed for funding consideration.' This criterion '...is designed to demonstrate institutional commitment to, and student interest in,' the program in question. The Graduate Committee will undertake to clarify Council's view of this criterion in the coming weeks. Your concern over substituting 'enrolment' for 'admissions' will be considered. Council will consider as well whether some minimum enrolment or number of admissions should be required to satisfy this criterion.

Council can only reiterate that the funding criteria for the first quinquennium, as set forth in Advisory Memorandum 77-VII, are now the criteria that must be addressed before any new graduate program will be given funding consideration. Old criteria are no longer sufficient for funding consideration. However, Council must stress that satisfaction of the four criteria will not necessarily guarantee a funding recommendation. In Advisory Memorandum 77-VII, Council stated that 'funding approval for new graduate programs would no longer be an automatic matter and that Council's own task in the funding approval process would include the "balancing of fiscal realities and new initiatives"'. Council is expressing the hope that you will understand that, in this period of fiscal constraint, it must seriously consider each new graduate program in light of the above statement. COU's assistance will be invaluable in carrying out this important task. In particular, Council needs assurance from COU that, from the viewpoint of 'a system on the brink', the program should be offered and funded despite financial constraint. In this connection, and consistent with the goal of

system rationalization, Council would like to be assured by COU that the particular institution could best offer the program and that the program is consistent with the aims, objectives and existing strengths of the institution. Such assurances are of great importance if Council's criteria are to be applied with a sense of perspective whereby, for example, a particularly desirable program might be funded even if a precise impression of external demand cannot be confirmed.

On behalf of the Graduate Committee, I hope that this letter serves to clarify the requests I conveyed to you at our meeting of October 18, 1979. It is the belief of the Graduate Committee that Council will approve of offering COU the opportunity to resubmit the ten graduate programs in the format suggested above by January 10, 1980. Nevertheless, I will be in contact with you in the near future to confirm the views of Council as expressed by the Graduate Committee in this letter.

Yours sincerely,

A handwritten signature in cursive script, reading "W. C. Winegard".

W. C. Winegard
Chairman

WCW:dd



Ontario
Council on
University
Affairs

416/965-5233

7th Floor
700 Bay Street
Toronto, Ontario
M5H 2T8

February 15, 1980

Dr. R. L. Watts,
Chairman,
Council of Ontario Universities,
130 St. George Street,
Suite 8039,
Toronto, Ontario.

Dear Dr. Watts,

During the recent discussions with COU, it became clear that you would appreciate some comments on program proposals when they first appear in the five-year plans. Pursuant to this, I am happy to send you the initial concerns of the Graduate Committee which were discussed at a recent meeting of Council. The Graduate Committee believes that these are some of the questions that both COU and Council will have to address in the future.

Since the Graduate Committee did not know the exact content of the proposals when it reviewed the plans, its questions could be framed only within the context of the need criterion.

Division A

- Canadian Literature: Will the need for this doctoral program be reviewed in the light of how many doctoral programs in English and French offer Canadian Literature as an area of specialization?
- Classics: Given that there are already six institutions offering master's programs in the Classics area, can a seventh be justified in terms of need?
- Fine Arts - Film: An MFA Film was approved for funding last year. Is another master's program in Film needed in the first quinquennium?
- Fine Arts - Music: Is there a need for additional master's and doctoral programs in this area? (there are currently three master's and one doctoral).

Fine Arts - Theatre: Is another master's program in Theatre or Drama needed? If it is needed, should it not be offered at an institution with existing strength at the graduate level in the area of Fine Arts?

Fine Arts - Visual Arts: There is at present one master's offering in Visual Arts in the province and five proposals in the five-year plans. Are any of the additional programs needed, and if so, how many? If an additional offering is required, should it not be offered at an institution with a history of strength in the entire area of Fine Arts?

French: Is there a need for a ninth master's program?

Linguistics: Based on the enrolment in the existing doctoral program, is there a need for another program?

Spanish: Is there a need for a sixth master's program in Spanish?

Theology: Should C.O.U. not review the area of graduate offerings in Theology, including programs offered at the universities and the Theological Colleges, before additional programs are contemplated?

Division B

Business and Administration: Is there a need for three more master's programs in a general area that appears to have some thirteen programs already? With respect to doctoral programs, Council voiced its concerns in Advisory Memorandum 78-III.

Communication Studies: There already is one master's program in the province. Should not the progress of this one be observed before another is contemplated?

Education: Seven MEd programs exist at the present time. Does Ontario need any more? Also, is there a need for another DEd program? If there is, perhaps COU should recommend where it should be, based on existing strengths in this discipline.

Geography: Given that there are already twelve master's programs, is there a need for another one?

Law: There are now four LIM programs in the province, none of which has a very high enrolment. Is another needed?

Physical Education & Recreation/Leisure Studies: Seven master's programs were approved for funding last year. Could a need for additional programs in these disciplines be substantiated? Also, there are now two doctoral programs in the province. Is another needed in this quinquennium?

Social Work: There are already five master's programs in the province. Is there a need for another? With respect to the proposed DSW, Council discussed this with the institution concerned at some length during the 1979 Spring hearings.

Sociology: Is there a need for a twelfth master's program?

Division C

Computer Science: There are six master's offerings in the general area of Computer Science and Information Science at the present time. With two exceptions enrolment in each program is relatively small. Does Ontario need any more master's programs?

Engineering: Considering the large number of master's programs that already exist, is there a need for any more? With respect to the doctoral proposal, there are already six doctoral programs in Mechanical Engineering. Is there a need for another?

Geology: There are already several doctoral programs in the general area of Geology. If there is a need for more geologists, should not this need be met through existing programs?

Mathematics: With thirteen doctoral programs now being offered, is there really a need for another one?

Division D

Looking at the Division D proposals in general, major concerns would no doubt be that the programs be of viable size and that they be offered by institutions with existing strengths in the areas in question. Division D already has a large number of very small programs.

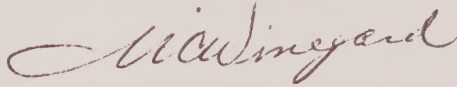
Health Behaviour: Is it advisable to proceed with a doctoral program without the benefit of several years experience with the master's program in this new area?

Interdivisional

Math and Philosophy: Is there a need for this type of combined offering that cannot be met through existing approved programs?

The Graduate Committee hopes that these preliminary comments will be useful to ACAP, OCGS and COU and also to the individual institutions. Naturally each of the proposals will have to be studied from the viewpoint of the funding criteria, the financial restraint facing the university system, developments in the graduate sector, and also the consistency of the program with the existing strengths of the institution.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "W. C. Winegard", written in a cursive style.

W. C. Winegard
Chairman

c.c. The Honourable Bette Stephenson, M.D.

